AHTD TRC TRANSPORTATION RESEARCH COMMITTEE

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Closing the Transportation Funding Gap in Arkansas

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Final Report

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CLOSING THE TRANSPORTATION FUNDING GAP IN ARKANSAS

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UALR University of Arkansas at Little Rock College of Business

AHTD Arkansas State Highway and Transportation Department

IEA Institute for Economic Advancement

CLOSING THE TRANSPORTATION FUNDING GAP IN ARKANSAS

Prepared for
Arkansas State Highway and Transportation Department

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Chapter 1

Introduction

1.1. Objective of the Study

The purpose of this report is to propose alternative financing means to supplement current revenue resources available to the Arkansas Highway and Transportation Department (AHTD) in order to meet the state's transportation needs in an economically sound manner.

The AHTD's primary revenue sources are fuel taxes, license and registration fees. Inflation, improved vehicle efficiency, and rising construction costs have weakened the purchasing power of fuel tax revenues despite increased rates. At the same time, traffic volumes on interstates and other roads have been growing as the economy expands and a rising proportion of existing lane miles are in need of repair. More than $19 billion in needs have been identified, while anticipated funding is about $4 billion, which results in a $15 billion shortfall over the next decade. This report discusses funding and financing techniques that would allow the state to close the funding gap three ways: 1) By leveraging federal capital for needed investment into the transportation system, 2) By utilizing the department's existing funds more effectively, and 3) By implementing alternative sources of funding. It is important that Arkansas takes a proactive approach in solving its transportation problem.

1.2. Contents of the Report

This report is divided into five chapters which discuss the topics described below.

Chapter 2: The Profile of the Arkansas State Highway and Transportation Department's (AHTD) Financial Structure describes the AHTD's current revenue sources and estimates the funding gap.

Chapter 3: Benchmark Analysis of Transportation Finance in Arkansas and Neighboring States compares Arkansas to its neighboring states in regard to revenue resources and revenue disbursements, its dependency on certain taxes and fees, and the state's responsibilities.

Chapter 4: Innovative Finance discusses financing alternatives that depart from the traditional pay-as-you-go sources intended to supplement fuel taxes and registration fees.

Chapter 5: Closing the Funding Gap offers alternative financing approaches that AHTD can use to close the funding gap.

Chapter 2

Profile of Arkansas State Highway and Transportation Department's (AHTD) Financial Structure

This chapter describes AHTD's major revenue sources and uses. It shows what the revenue sources are, how they are collected and distributed, and what portion of the AHTD budget they represented in F.Y. 2006. The majority of funding comes from motor fuel taxes (76.7 percent) and registration fees (19.7 percent). Figure 2.1[1] and 2.2[2] summarizes highway-user revenues and their receipts and distributions. Based on the future needs and projected revenues in the next decade, funding shortfalls are anticipated.

Figure 2.1. F.Y. 2006: Highway-User Revenues Receipts (in millions of dollars)

Motor Fuel Taxes $464.67 (76.7%)	Registration Fees Auto & Trucks…$111.03 Other……. $8.18 Total……....$119.21 (19.7%)	Miscellaneous Revenues $21.88 (3.6%)

Total Receipts: $605.77

Figure 2.2. F.Y. 20065: Highway-User Revenues Distributions (in millions of dollars)

Constitutional & Fiscal Agencies: $16.90 (2.8%)	**D i s t r i b u t i o n**	Motor Vehicle Title Fees: $1.17 (0.2%)
Fuel Tax Refund: $14.28 (2.4%)		State Police: $2.08 (0.3%)
State Aid Roads: $20.33 (3.4%)		City Streets: $81.19 (13.4%)
County Roads: $81.19 (13.4%)		Surcharge for Central Services: $1.09 (0.2%)

STATE HIGHWAYS

$387.54 (64.0%)

[1] Arkansas State Highway and Transportation Department, "2006 Arkansas State Highway Needs Study and Highway Improvement Plan," June 2006, 32.

[2] Virginia Porta (Arkansas State Highway and Transportation Department), e-mail message to author, October 23, 2006. Arkansas State Highway and Transportation Department, "F.Y. 2006: Highway-user Revenues Receipts and Distribution," August 23, 2006.

2.1. Current Revenue Sources

2.1.1. Highway User Fees

User fees are comprised of the state's gasoline and motor fuel taxes, special petroleum taxes, and vehicle registration fees. In 1991, the Arkansas General Assembly enacted a combination of gasoline and diesel fuel taxes, commercial vehicle registration fees, and other measures to help finance a 15-year road program for the State Highway Commission to build and make improvements to approximately 6,035 miles of state highways and approximately 560 bridges. This program was referred to as the 1991 Highway Improvement Program (HIP).[3]

Motor Fuels. Collection from motor fuel[4] taxes in FY 2005 totaled $403.4 million in FY 2005[5] and accounted for 75 percent of the total highway user revenue. While both the state and federal motor fuel tax rates have increased steadily in the last 70 years, these increases do not equate to an absolute increase in funding needs. Motor fuels tax rates are assessed on each gallon of fuel sold and are not calculated as a percentage of the total sale. Furthermore, due to an increase in vehicle efficiency, the actual gallons of fuel purchased could decrease while driving distances remain the same or actually increase.[6] Table 2-1[7] summarizes 2005 revenues from motor fuels.

Table 2-1. F.Y 2005 Motor Fuels Revenue (millions of dollars)

	Total Amount	Annual Amount to AHTD	Annual Amount to Cities	Annual Amount to Counties
Motor Fuel Revenues	403.40	282.38	60.51	60.51
Gasoline	279.86	195.90	41.98	41.98
Diesel	123.4	86.38	18.51	18.51
LPG/CNG	0.14	0.10	0.02	0.02

Gasoline Tax.[8] The Arkansas gasoline tax is 21.5 cents per gallon (cpg) excluding federal taxes. The state levies an additional 0.3 cpg in taxes, which is a special environmental fee used to regulate underground storage tanks. Each penny of the tax is worth 13.93 million per year.

In 2005, Arkansas ranked 33rd in the nation in its state gasoline tax rate; the national average for gasoline excise tax is 18.2 cpg and other gasoline taxes are 10.2 cpg. Total state and federal gasoline taxes are 40.2 cpg.

Special Fuels.[9] The Arkansas diesel tax is 22.5 cpg, excluding federal taxes. (The rate for special fuels is lower; LPG is 16.5 cpg; CNG is 5 cpg.) The state levies an additional 0.3 tax on motor

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[3] See note 1, 1.
[4] The term "motor fuel" applies to gasoline and all other fuels, including special fuels, coming under the purview of the state motor fuel tax laws. "Special fuels" include diesel fuel and, to the extent they can be quantified, liquefied petroleum gases such as propane. Gasohol, a blend of gasoline, and fuel alcohol, are included with gasoline.
[5] This amount excludes 3% allocated to the Central Services Fund.
[6] See note 1, 25.
[7] See note 1, 32.
[8] Virginia Porta (Arkansas State Highway and Transportation Department), e-mail to author, February 7, 2006. American Petroleum Institute, "Gasoline Tax Rates by State," 1st Quarter, 2006.

fuels. Thus, the rate is composed of two parts: the base rate of 22.5 cpg, and a 0.3 cpg environmental fee. In aggregate, in FY 2005 each penny collected was worth $5.85 million per year.

Arkansas ranked 32nd in the nation in its motor fuel tax rate. The national volume-weighted average for motor fuel tax rate is 18.2 cpg and 10.6 cpg for diesel other taxes. The federal tax rate on motor fuel is 24.4 cpg. Total state and federal tax for diesel fuel is 47.2 cpg.

Special Petroleum Tax. As noted above, both gasoline and special fuels are subject to a 0.3 cpg Petroleum Environmental Assurance Fee. The tax is distributed to the Petroleum Storage Tank Fund and is used to cleanup tank spills. The amount raised in FY 2005 was included in the motor fuel revenue.

Vehicle Registration Fees. Registration fees vary by vehicle. Registration fees across all classes of vehicles and license plate types generated $107.62 million in revenue for Arkansas in FY 2005. Autos and trucks generated 84.4 percent (or $90.8 million) of this amount. Revenues generated from the collection of motor vehicle registration fees are summarized in Table 2-2[10].

Table 2-2. F.Y. 2005 Motor Vehicle Registration Fees (millions of dollars)

	Total Amount	Annual Amount to AHTD	Annual Amount to Cities	Annual Amount to Counties
Motor Vehicle Registration Fees	107.62	75.33	16.14	16.14
Automobiles & Pickups	42.87	30.01	6.43	6.43
Heavy Trucks	47.93	33.55	7.19	7.19
Other Vehicles	16.82	11.77	2.52	2.52

The total amount does not include the 3 percent that is distributed to the Constitutional and Fiscal Agencies fund to offset various costs incurred by the state government, including costs associated with collection and administration of motor fuel taxes. AHTD receives 70 percent of the total revenue, and cities and counties each receive 15 percent of the total revenues collected.[11]

The state motor vehicle registration fee schedule is summarized in Table 2-3 and Table 2-4. Table 2-3 lists fees for different weight groups of automobiles; Table 2-4 provides the same information for trucks.[12]

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[9] Virginia Porta (Arkansas State Highway and Transportation Department), e-mail to author, February 7, 2006. American Petroleum Institute, "Diesel Tax Rates by State," 1st Quarter, 2006.
[10] See note 1, 32.
[11] Office of Highway Policy Information. Highway Funding and Motor Fuels Division. *Highway Taxes and Fees*, Table MF-106 (June 2001): FHWA-PL-01-029.
[12] Office of Highway Policy Administration, "Summary of State Motor-Vehicle Registration Fee Schedules," 2001, http://www.fhwa.dot.gov/ohim/hwytaxes/2001/pt11.htm (accessed August 1, 2006).

Table 2-3. Summary of State Motor Vehicle Registration Fee Schedule: Automobiles

AUTOMOBILES			
FEE BASIS	APPROXIMATE RANGE		FEE FOR TYPICAL VEHICLE
	FROM	TO	
Unladen weight groups: $17 for 3,000 lbs or less; $25 for 3,001 to4,500 lbs; $30 for 4,501 lbs and over.	17.00	25.00	17.00

Table 2-4. Summary of State Motor Vehicle Registration Fee Schedule: Trucks

TRUCKS					
	APPROXIMATE FEE RANGE		FEE FOR TYPICAL VEHICLES		
FEE BASIS	REGULAR REGISTRATION	SPECIAL RATES FOR FARM TRUCKS	NONFARM	FARM	HEAVY SINGLE UNIT
Flat fee plus gross weight groups.	$21.00 for 6,000 lbs or less to $12.35 per 1,000 lbs for 60,000 lbs.	Weight fee based on gross weight and number of axles, with a minimum fee of $32.50 and a maximum fee of $163.00 for a 5-axle vehicle.	130	65	

In the past five years, highway revenue from motor fuel taxes, vehicle and registration fees, and miscellaneous sources has grown $55 million or an average of 1.4 percent per year.[13]

2.1.2. Miscellaneous Revenues

Miscellaneous revenues are comprised of interest on SHD Funds, title transfer fees, driver search fees, operator's license fees, special permit fees and other income. These sources combined to add $26.43 million or 5 percent of total highway user revenues in FY 2005.[14]

2.1.3. Bond Authorizations

Background. On June 15, 1999, Arkansas voters approved the proposal to issue Grant Anticipation Revenue Vehicle (GARVEE) bonds to fund the 1999 Interstate Rehabilitation Program (IRP). The Interstate Rehabilitation Program exceeded $2.0 billion, which included funds form GARVEE bonds, Federal Aid Interstate Maintenance Fund, and other highway revenue sources. The program provided for major improvements to the Interstate System. The work was to be let to contract in three years and completed in five years.

[13] See note 1, 27.
[14] See note 1, 32.

Current Situation. In December 2005, Arkansas voters rejected a proposed bond issue for continued work on the state's interstate highway system. This proposal would have allowed the Commission to build upon the success achieved under the 1999 IRP and to continue issuing GARVEE bonds to be retired, using the existing revenue streams. The Commission's bond debt would never have exceeded the $575 million authorized in 1999, and new bonds could have been issued as the original bonds were retired.[15]

2.1.4. Local Revenues

Thirty percent of all revenue sources (motor fuel revenues, motor vehicle registration fees, and miscellaneous revenues) are apportioned equally between cities and counties. Under this provision, cities and counties each received a total of $80.61 million, which can be broken down as follows: $60.51 million from motor fuel revenues, $16.14 million from motor vehicle registration fees, and $3.9 million from miscellaneous revenues.[16]

2.1.5. Federal Funds

The current federal transportation act – Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) – authorizes $925 billion nationwide for highways, highway safety, and public transportation. AHTD receives approximately $505 million annually from SAFETEA-LU.

Federal-aid funds are reduced through the annual appropriation, federal deficit, and emergency relief. Use of the funds is also constrained by specific program requirements, which stipulates that the state does not have complete discretion over the funds. Certain funds must be passed through AHTD to local entities for local projects, and others must be used for sate nonconstruction programs or used as earmarked for congressionally-designated projects or corridors. The commission has little or no discretion over $272 million annually. This includes State nonconstruction programs (state enhancements and state planning and research among others), nondiscretionary programs (interstate maintenance, bridge replacement, safety, etc.), and congresionally-designated projects and corridors, which all account for $224 million. Local projects account for approximately $48 million annually. Federal-aid funds are also reduced by an obligation limitation. In 2006, this spending limit was 85 percent of all appropriated funds. By comparison, under the previous federal transportation act, this spending limit was approximately 92% of appropriated funds.[17]

2.2. Revenue Spending

Table 2-5. Arkansas State Highway Expenditures, revised on June, 2005[18]

A. 1 Capital outlay on state system	
a. Cost of acquiring right-of-way	25,985,191
b. Preliminary and construction engineering	63,136,388

[15] See note 1, 1.
[16] See note 1, 32.
[17] See note 1, 28-31.
[18] Knighten Starnes (Arkansas State Highway and Transportation Department), e-mail to author, June 8, 2006. FHWA-531

c. Construction of highways		537,885,406
d. Total, A-1		627,006,985
Report Total for Item A.2 on page 2		
A. 3 Highway and traffic services		
a. Traffic control operations		23,447,325
b. Snow and ice removal		3,979,889
c. Other		
d. Total, A-3		27,427,214
A. 4 General administration and miscellaneous expenditures for State Highways		
a. General administration & engineering		20,216,803
b. Highway planning & research		8,466,797
c. Total, A-4		28,683,600
A. 5 Law Enforcement and Safety		
a. Traffic supervision		34,034,315
b. Highway, traffic, and driver safety programs		8,053,093
c. Vehicle inspection		
d. Vehicle size and weight enforcement		9,314,598
e. Total, A-5		51,402,006
Expenditures on Other Roads and Streets ----->	**A.7 Other State roads not on State System**	**A.9 Locally administered roads**
a. Capital outlay	11,887,468	44,027,013
b. Maintenance and Traffic Services	6,934,356	73,378,355
c. Administration	990,626	45,657,643
d. Total, A-7 & A-9	19,812,450	163,063,011
Report Total for Items A.6, A.8 and A.10 on page 2		
Expenditures for Mass transit Purposes ----->	**A.11 Direct Expenditures**	**A.12 Grants-in-aid**
a. Capital Outlay		19,945,715
b. Operations and Maintenance		6,762,078
c. Administration, Planning, and Research		8,452,598
d. Debt Service		
e. Total, A-11 & A-12	0	35,160,391
A.13 Expenditures for Nontransportation Purposes		
a. DFA Revenue Bldg		1,786,111
b. State General Revenue		1,185,211
c. DFA Operations		4,441,655
d. (Specify)		
e. (Specify)		
f. (Specify)		
g. Total, A-13		7,412,977

2.3. 10-Year Gap

2.3.1. Total Cost for Needs and Other Improvements

The 2006 Highway Needs Study compared the costs associated with Arkansas' highway transportation needs over the next decade with the expected funding requirements.

The costs for these needs and other improvements include capacity needs – both new locations and major widenings, which were expected to total $3.4 billion. The proposed improvements address urban and rural needs related to congestion and safety. Another cost component is system preservation, which is defined as interstate rehabilitation, reconstruction, resurfacing, shoulder improvements, and bridge rehabilitation or reconstruction. The total anticipated system preservation needs for the next 10 years is approximately $8.8 billion. $5.2 billion is for the congressionally-designated high priority corridors and $1.7 billion for economic development connectors, which will build four-lane connections to cities with populations greater than 5,000.[19]

2.3.2. Estimated Average Annual Construction Funds Available for Commission Discretions

The information below presents the sources of revenue that can be expected over the next decade. The total average revenue per year available for commission discretion is $267 million.

Estimated Annual Fund Available for Commission Discretion[20]

Federal Funds (Est. Average Annual Revenue from SAFETEA-LU).... $505 million

State Highway Funds (Est. Average Annual Revenue).....$393 million

Total Federal and State Highway Funds.....$898 million

Less Federal Funds for Fixed State Expenditures, Non-AHTD Federal Funds, Nonconstruction Programs, and Federal Obligation Limitations ..... $215 million

Less State Funds for Congressionally-designated projects or corridors, and Match for Nonconstruction Federal-aid ..... $224 million

Less Local Projects ..... $48 million

Federal and State Funds
Highway and Bridge Construction.....$411 million

[19] See note 1, 23.
[20] See note 1, 31.

Funds Specific to Categories
No Commission Discretion……..$144 million

Highway Construction Funds
Available for Commission Discretion ……..$267 million

2.3.3. Fund Shortfall

The bottom line is that more than $19 billion in needs have been identified, while anticipated funding is about $4 billion, which results in a $15 billion shortfall over the next 10 years (approximately $1.5 billion/year). The information is summarized in Table 2-6[21].

Table 2-6. Summary of Future Needs and Funds Available (Years 2006 -- 2016)

Capacity Improvements	$3.4 billion
System Preservation	$8.8 billion
Congressionally-Designated High Priority Corridors	$5.2 billion
Economic Development Connectors	$1.7 billion
Total Needs and Other Improvements	$19.1 billion
Anticipated Funding	$4.1 billion
10-Year GAP	**$15.0 billion**

[21] See note 1, 23.

Chapter 3

Benchmark Analysis of Transportation Finance in Arkansas and Neighboring States

Benchmarking, for purposes used in this study, is a comparison of Arkansas' transportation finances with those of the surrounding states: Alabama, Mississippi, Missouri, Oklahoma, Tennessee, and Texas. The objective of this section is to understand Arkansas' place in the region and to evaluate its standing.

Examining the transportation funding of surrounding states is important because they compete most directly with Arkansas in economic development. Transportation is a critical component in providing a high quality of life for economic, recreational, and educational pursuits. The ability to move people and goods efficiently and effectively is essential.

3.1. Arkansas' Surrounding States

Arkansas' six neighboring states are Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, and Texas. Louisiana, Arkansas' neighbor to the south, was not included in the study. Alabama was added to the study although the state is not an immediate neighbor of Arkansas. In 2005, Arkansas' population was 2.8 million. Total gross state product was $86,802 million. When compared to its neighboring states in 2005, Arkansas was ranked seventh in total population and sixth in total gross state product. Arkansas' per capita personal income of $26,874 ranked sixth among the states. These statistics are shown in Tables 3-1[22], 3-2[23], and 3-3[24] below.

Arkansas' population estimate increased by 3.8 percent between 2000 and 2005 and ranks third among its neighboring states. Total gross state product growth in Arkansas was 29.9 percent in the last five years and the state ranks fourth in this category. Arkansas' per capita personal income growth, adjusted for inflation, was 22.5 percent between 1999 and 2004 (second amongst neighboring states).

Table 3-1. Population

State	2005	State Rank	2000	Change	Rank Based on % Change
Alabama	4,557,808	4	4,452,339	2.4%	7
Arkansas	2,779,154	7	2,678,511	3.8%	3
Mississippi	2,921,088	6	2,848,753	2.5%	6
Missouri	5,800,310	3	5,606,265	3.5%	4
Oklahoma	3,547,884	5	3,454,321	2.7%	5
Tennessee	5,962,959	2	5,703,052	4.6%	2
Texas	22,859,968	1	20,949,354	9.1%	1

[22] Bureau of Economic Analysis, "Population," March 2006, http://bea.gov/bea/regional/spi/drill.cfm (accessed September 11, 2006).
[23] Bureau of Economic Analysis, "Gross State Product," June 6, 2006, http://bea.gov/bea/regional/gsp/action.cfm (accessed September 11, 2006).
[24] Bureau of Economic Analysis, "Per Capita Personal Income," March 2006, http://bea.gov/bea/regional/spi/drill.cfm (accessed September 11, 2006).

Table 3-2. Gross State Product (millions of dollars)

State	2005	State Rank	2000	Change	Rank Based on % Change
Alabama	149,796	4	114,576	30.7%	3
Arkansas	86,802	6	66,801	29.9%	4
Mississippi	80,197	7	64,266	24.8%	6
Missouri	216,069	3	176,708	22.3%	7
Oklahoma	120,549	5	89,757	34.3%	2
Tennessee	226,502	2	174,851	29.5%	5
Texas	982,403	1	727,233	35.1%	1

Table 3-3. Per Capita Personal Income (dollars)

State	2005	State Rank	2000	Change	Rank Based on % Change
Alabama	29,136	5	23,764	22.6%	1
Arkansas	26,874	6	21,925	22.5%	2
Mississippi	25,318	7	21,005	20.5%	3
Missouri	31,899	2	27,241	17.1%	6
Oklahoma	29,330	4	24,407	20.2%	4
Tennessee	31,107	3	26,097	19.2%	5
Texas	32,462	1	28,313	14.7%	7

3.2. Fuel Tax and Vehicle Registration and License Fees

Figures 3-1 through 3-2[25] compare the primary source of state transportation revenue for Arkansas and its neighboring states by mode of transportation. The main revenue sources in highway mode are fuel taxes and registration and license fees. Transit, air, and water modes have contributed 12 % on average to the states' DOT's revenues in the past 15 years.

3.2.1 Fuel Tax Rates

The states in this study levy taxes on both gasoline and special fuel, which includes diesel fuel, liquefied petroleum gas (LPG), and gasohol. Table 3-4[26] presents more detailed information on gasoline and diesel taxes in the studied states. Gasoline tax rates vary by state. They range from 16 to 21.5 cents per gallon (cpg).[27] Arkansas' gasoline tax rate of 21.5 cpg is the highest among the states under consideration. Diesel tax is the highest in Arkansas as well. The state collects 22.5 cpg. Oklahoma, in contrast, taxes diesel fuel by 13 cpg, which is the lowest among the sample states. It has to be noted, however, that the diesel fuel price in Arkansas is lower than that of Mississippi and Oklahoma. As of August 4, 2006, the average price of diesel in Arkansas was $2.95 whereas Mississippi and Oklahoma's diesel price was $3.04 and $3.03, respectively. The tax rate for LPG ranges from 14 to 17 cpg for the neighboring states. Tennessee had the lowest rate and Mississippi, Missouri, and Oklahoma occupied the higher-end rate. The tax range for gasohol in the studied area is 17 to 21.7 cpg, with Oklahoma and Missouri on the low end and Arkansas on the high end.

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[25] Bureau of Transportation Statistics, "Government Transportation Financial Statistics 2003," November 4, 2006, http://www.bts.gov/publications/government_transportation_financial_statistics/2003/ (April 24, 2006).
[26] American Petroleum Institute, "Notes to State Motor Fuel Excise and Other Tax Rates," July 1, 2006, http://new.api.org/policy/tax/upload/2006%20july%20excise%20chart-2.pdf (accessed October 4, 2006).
[27] These are base rates and they do not include other taxes such as environmental or inspection fees.

Figure 3-1. ALABAMA

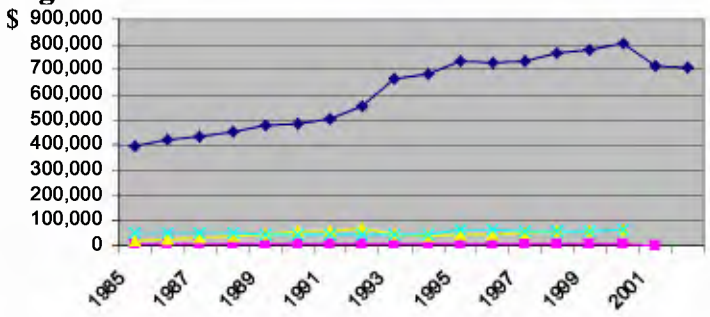


Figure 3-2. ARKANSAS

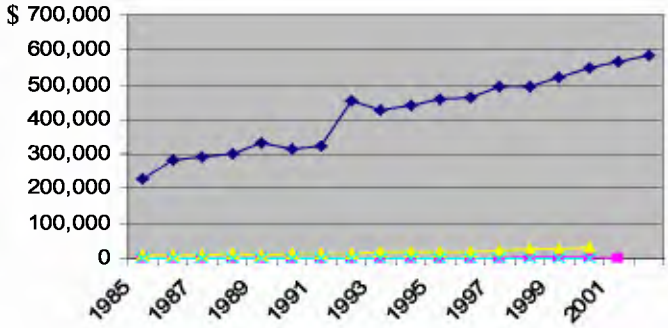


Figure 3-3. MISSISSIPPI

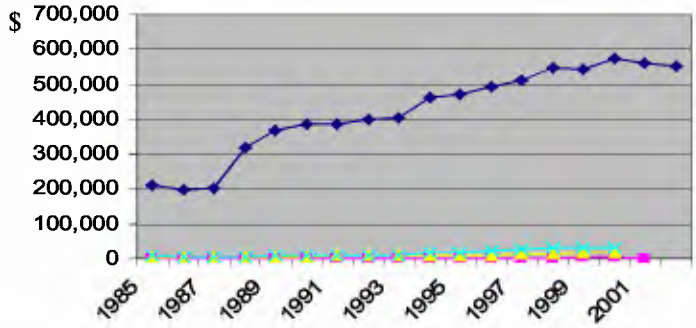


Figure 3-4. MISSOURI

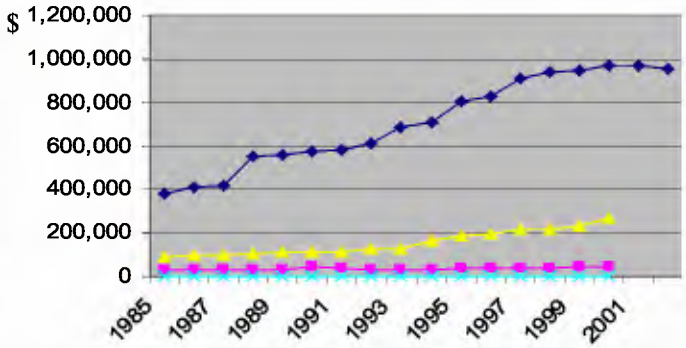


Figure 3-5. OKLAHOMA

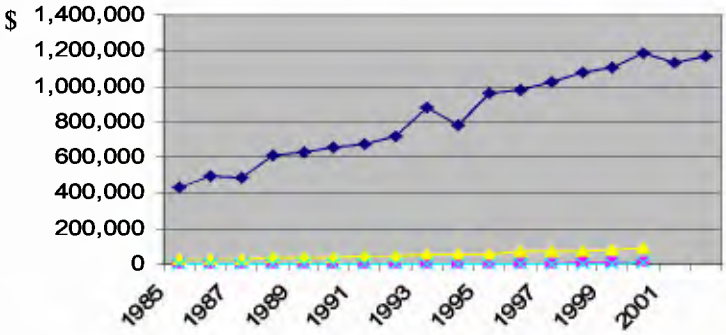


Figure 3-6. TENNESSEE

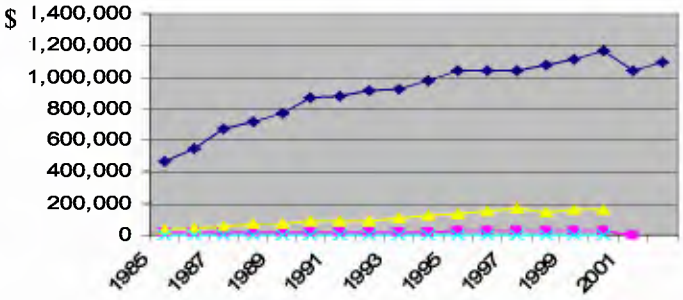


Figure 3-7. TEXAS

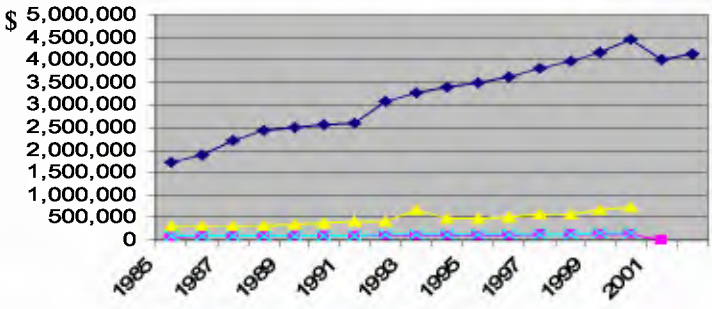


Table 3-4. State Motor Fuel Excise and Other Tax Rates

State	Gasoline State Excise	Gasoline Other Taxes	Gasoline Total State Taxes	Gasoline Total State and Federal Taxes	Diesel State Excise Taxes	Diesel Other Taxes	Diesel Total State Taxes	Diesel Total State and Federal Taxes
AL	16.0	4.3	20.3	38.7	17.0	4.3	21.3	45.7
Notes	Other taxes include a 2cpg inspection fee. Counties can levy up to 5 cpg with approval of the state legislature. Cities and counties can levy additional tax—rates range from .5 cpg to 4 cpg. An additional 1 cpg UST/AST Trust Fund Environmental Transport Fee is levied at the wholesale level to cover remediation costs.							
AR	21.5	0.3	21.8	40.2	22.5	0.3	22.8	47.2
Notes	Plus .30 cpg environmental assurance fee assessed at the wholesale level for underground storage tank fund.							
MS	18.0	0.8	18.8	37.2	18.0	0.8	18.8	43.2
Notes	Other taxes include 0.4 cpg Environmental Protection Fee. In Hancock, Harrison, and Jackson ounties there is an additional 3 cpg Seawall tax.							
MO	17.0	0.6	17.6	36.0	17.0	0.6	17.6	42.0
Notes	Governor signed legislation in 2002 that included removal of the 2008 expiration date of the 6 cpg temporary tax increase adopted by voters in 1992. Does not include additional .05 cpg agriculture inspection fee and .50 cpg transportation load fee.							
OK	16.0	1.0	17.0	35.4	13.0	1.0	14.0	38.4
Notes	Other taxes include 1 cpg per gallon UST fee.							
TN	20.0	1.4	21.4	39.8	18.0	0.4	18.4	42.8
Notes	Other taxes include 1cent special petroleum tax for gasoline and .4 cpg environmental assurance fee.							
TX	20.0		20.0	38.4	20.0		20.0	44.4
Notes	--							
U.S. Averages	18.2	10.2	28.4	46.8	18.2	10.6	28.8	53.2
Notes	Reflects volumeweighted averages.							

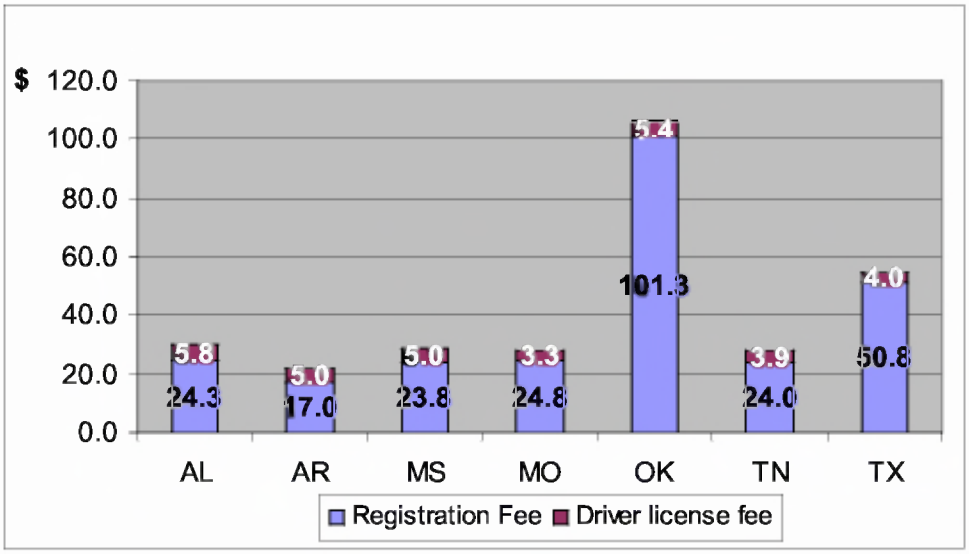
3.2.2. Vehicle Registration and License Fees

Vehicle registration and license fees are other sources of transportation funding. The types of fees and taxes levied vary by states. In addition, select counties in some states levy a fixed tax, such as Mississippi's privilege tax and Tennessee's wheel tax. In other states, a highway use or motor vehicle use tax is levied. The estimated total cost of vehicle registration[28] and license fees[29] for the

[28] Federal Highway Administration, "The Motor-vehicle Registration Fee Schedule," January 1, 2001, http://www.fhwa.dot.gov/policy/ohim/hs04/mvinfo.htm (accessed January 30, 2006).

purchase of a $20,000 automobile in each studied state is compared in Figure 3-9. Since license fees are paid every four years in most of the studied states, an average yearly fee is used in the comparison. Oklahoma, which has the highest combined fee for registration and license, averages $106.7 a year. Arkansas' combined registration and license fee of $22.0 is the lowest in the group.

Figure 3-9. Annual Average Cost for Registration and Licensing of $20,000 Automobile



Registration Fee. Motor-vehicle registration fees for typical vehicles vary across states. Alabama, Mississippi, and Tennessee charge a flat fee. Arkansas' fees are based on vehicles' unladen weight. Missouri has different charges based on vehicles' horsepower and Texas bases them on vehicles' age. Oklahoma's tag fees are based on the number of years the vehicle has been registered in the state; the longer it has been registered, the lower the charge. Table 3-5[30] represents the motor-vehicle registration fee schedule for typical vehicles.

Alabama Department of Revenue, "Alabama Registration (Tag) Fee Schedule," January 1, 2005, http://www.revenue.alabama.gov/motorvehicle/mvforms/FeeSchedule.pdf (accessed October 2, 2006).
Arkansas Department of Finance and Administration, "Motor Vehicle Registration Fee Schedule," http://www.arkansas.gov/dfa/motor_vehicle/pdf/schedule_fee1.pdf (accessed October 2, 2006).
Department of Motor Vehicles, "Mississippi: Car Registration," http://www.dmv.org/ms-mississippi/car-registration.php (accessed October 2, 2006).
Oklahoma Tax Commission, "MV: Noncommercial Vehicle Registration," August 1, 2006, http://www.tax.ok.gov/mv4d.html (October 2, 2006).
Oklahoma Tax Commission, "Motor Vehicle: Excise Tax," September 1, 2005, http://www.tax.ok.gov/mv3.html (accessed October 2, 2006).
Department of Motor Vehicles, "Tennessee: Car Registration," http://www.dmv.org/tn-tennessee/car-registration.php (accessed October 2, 2006).
Texas Department of Transportation, "Schedule of Texas Registration Fees" January 1, 2006, ftp://ftp.dot.state.tx.us/pub/txdot-info/vtr/fees/2006fees.pdf (accessed October 2, 2006).
[29] Department of Motor Vehicles, "States: Driver Licenses," 2006, http://www.dmv.org/drivers-license.php (accessed October 2, 2006).
Federal Highway Administration, "The Motor-vehicle Registration Fee Schedule," January 1, 2001, http://www.fhwa.dot.gov/ohim/hwytaxes/2001/pdf/pt11.pdf (accessed January 30, 2006).
Oklahoma Department of Public Safety, "Digital Driver Licenses," 2006, http://www.dps.state.ok.us/dls/ddl/ (accessed October 2, 2006).
[30] See note 29.

Table 3-5. The Motor-Vehicle Registration Fee Schedule for Typical Vehicle

STATE	FEE BASIS /1/	APPROXIMATE RANGE		FEE FOR TYPICAL VEHICLE /4/
		FROM /2/	TO /3/	
AL	Flat fee. A $1.25 issuance fee is included in columns (2) through (4).	$24.25	$24.25	$24.25
AR	Unladen weight groups: $17 for 3,000 lbs or less; $25 for 3,001 to 4,500 lbs; $30 for 4,501 lbs and over.	17.00	30.00	17.00
MS	Flat Fee. $8.75 decal fee plus $15.00 privilege tax. An additional $1.25 is assessed when new plates are issued. Ad valorem and sales taxes are collected based on the value the vehicle and the county one lives in.	23.75	23.75	23.75
MO	Horsepower groups: $18.25 for less than 12 horsepower to $51.25 for 72 horsepower and over. A $3.50 processing fee is included in columns (2) through (4).	21.75	54.75	24.75
OK	Flat fee, value, and age: Tag fees are based on the number of years the vehicle has been registered in Oklahoma. Fee for 1st through 4th year is $91, 5th through 8th year is $81, 9th through 12th year is $61, 13th through 16th year is $41, and 17th year and over is $21. The excise tax on the purchase of a new or used vehicle is assessed as follows: New Vehicle: 3.25% of the purchase price; Used Vehicle: $20.00 on the 1st $1250.00 of value + 3.25% of the remainder. A $1.75 admin. fee and a $3.00 general revenue fund fee are included in columns (2) through (4). The $15.00 registration fee is eliminated for vehicles 21 years or older.	21.00	91.00	101.25
TN	Flat fee. A $2.50 clerk's fee is included in columns (2) through (4). A $1.00 reflectorized plate fee is assessed when new plates are issued.	24.00	24.00	24.00
TX	Age groups or flat rate and gross weight. $40.50 for model year more than 6 years from date of annual registration to $58.50 for model year 3 years or less from date of annual registration. $25.00 plus 60 cents per cwt. for vehicles over 6,000 lbs. A 30 cent reflectorized plate fee is included in columns (2) through (4).	40.80	58.80	50.80

Table 3-6[31] is the motor-vehicle registration fee schedule for single unit trucks. This Table lists fee basis, regular registration fee, special rates for farm trucks, fees for typical nonfarm and farm vehicles, and fees for heavy single units.

[31] Federal Highway Administration, "The Motor-vehicle Registration Fee Schedule," January 1, 2001, http://www.fhwa.dot.gov/ohim/hwytaxes/2001/pdf/pt11.pdf (accessed January 30, 2006).

Table 3-6. The Motor-Vehicle Registration Fee Schedule for Single Unit Truck[32]

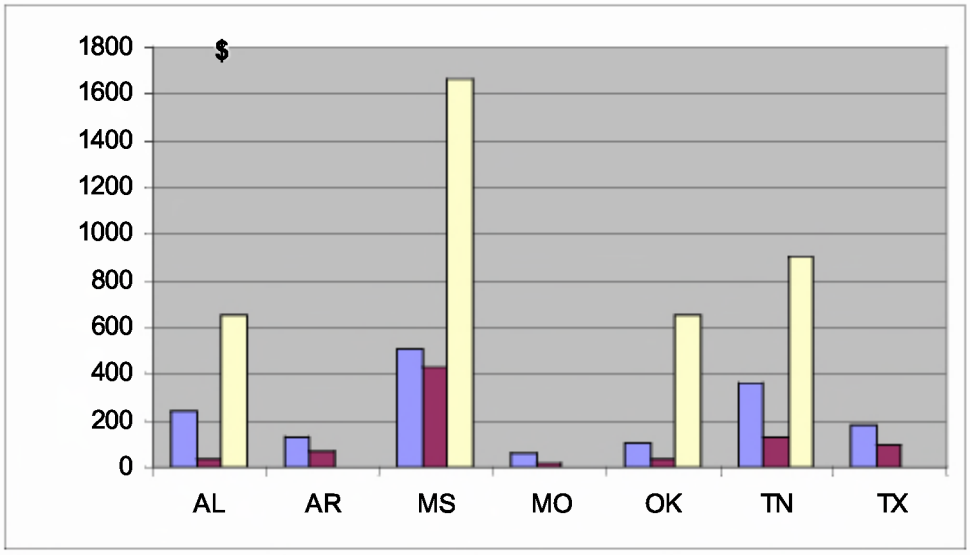
STATE	FEE BASIS /1/	APPROXIMATE FEE RANGE		FEE FOR TYPICAL VEHICLES		HEAVY SINGLE UNIT /6/
		REGULAR REGISTRATION /2/	SPECIAL RATES FOR FARM TRUCKS /3/	NONFARM /4/	FARM /5/	
AL	Gross weight groups. A $1.25 issuance fee is included in columns (4), (5) and (6).	$23 for up to 8,000 lbs to $845 for 80,001 lbs and over.	$30 for up to 30,000 lbs to $85 for 42,000 lbs.	236.25	31.25	651.25
AR	Flat fee plus gross weight groups.	$21.00 for 6,000 lbs or less to $12.35 per 1,000 lbs for 60,000 lbs.	Weight fee based on gross weight and number of axles, with a minimum fee of $32.50 and a maximum fee of $163.00 for a 5-axle vehicle.	130	65	--
MS	Flat fee plus gross weight groups.	$8.75 decal fee plus $7.20 for 6,000 lbs or less to $2,862.00 for 80,000 lbs. An additional $1.25 is assessed when new plates are issued.	$8.75 decal fee plus $7.20 for 6,000 lbs or less to $2,214.00 for 80,000 lbs. An additional $1.25 is assessed when new plates are issued.	503.5	425	1663
MO	Gross weight groups.	$25.50 for 6,000 lbs or less to $1,719.50 for over 78,000 lbs.	$15.50 for 6,000 lbs or less to $350.50 for over 72,000 lbs.	63	20.5	-
OK	Gross weight and age on trucks up to 15,000 lbs. Over 15,000 lbs based only on gross weight registered. A $1.75 administrative fee and a $3.00 general revenue fund fee are included in columns (4), (5) and (6).	$100.00 for under 15,000 lbs to $1,083.00 for 90,000 lbs. Fee reduced after 5th year on trucks under 15,000 lbs. Minimum fee: $29.00.	Flat fee.	100	35	653

[32] See note 29.

TN	Gross weight groups.	$39.75 for 9,000 lbs or less to $1,334.25 for 80,000 lbs.	$19.50 for 9,000 lbs or less to $493.75 for 80,000 lbs.	360.25	129.8	898.25
TX	Flat fee plus gross weight groups. A 30 cent reflectorized plate fee is included in columns (4) and (5).	$25.00 plus 44 cents per cwt. For 6,000 lbs or less to 99 cents per cwt. for over 31,000 lbs. Diesel trucks pay 11 percent additional fee.	1/2 regular fee plus $5.	180.07	95.19	-

Figure 3-10 presents a comparison of motor-vehicle registration fees for typical vehicles among single unit trucks. The highest fee for a nonfarm single unit truck is $503.5 in Mississippi and the lowest one in Missouri ($63). Arkansas charges $130 in registration fees. Mississippi has also the highest registration fees on farm single unit trucks among the selected states. The state charges $425, as opposed to Alabama that charges only $32. Arkansas' registration fee for a farm single unit truck for a typical vehicle is $65. Data for heavy single unit were not available for Arkansas, Missouri, and Texas. For the rest of the states, the figure ranges from $1,663 (Mississippi) to $651.25 (Alabama).

Figure 3-10: Motor-Vehicle Registration Fee for Single Unit Truck: Fees for Typical Vehicles



	AL	AR	MS	MO	OK	TN	TX
Nonfarm	236.25	130	503.5	63	100	360.25	180.07
Farm	32.25	65	425	20.5	35	129.8	98.19
Heavy Single Unit	651.25	NA	1663	NA	653	898.25	NA

Motor-Vehicle Driver Licenses. Table 3-4[33] presents the full amount of driver license fees for selected states and the length of term of each motor-vehicle driver license.

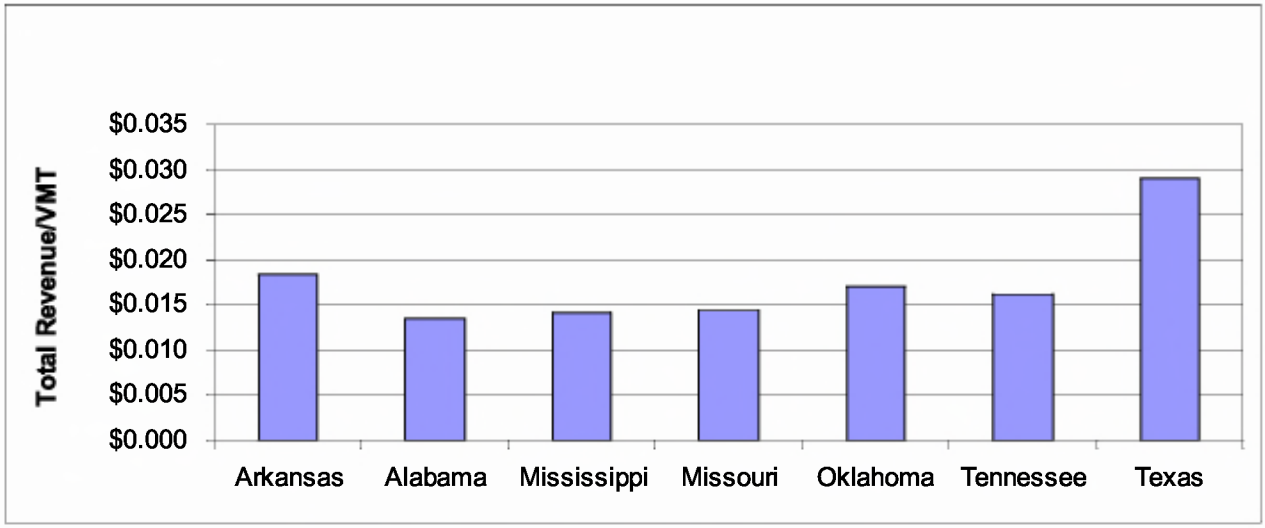
Table 3-4: Motor-Vehicle Driver License Fee

	AL	AR	MS	MO	OK	TN	TX
Driver License Fees	$23	$20	$20	$20	$21.5	$19.5	$24
Length of Term	4	4	4	6	4	5	6

3.2.3. Revenue from Fuel Tax and Registration and License Fees

There are differences in the amount of transportation revenue generated in each state.[34] These differences result primarily from variations in tax rates and total populations. For instance, Texas collected $6,692 million in 2004 whereas the total revenue generated in Arkansas was $578 million. To make the revenues comparable, they were divided by the Vehicle Miles Traveled (VMT).[35] This adjusts the total revenue in proportion to the number of cars in each state and their respective mileage. Figure 3-11 shows the adjusted fuel tax and registration and license fee revenues generated by Arkansas and its neighboring states.

Figure 3-11. Revenue from Fuel Tax and Registration and License Fees Proportionate to VMT



Texas is the most efficient state in collecting fuel tax and registration and license fees revenue. Every driver in Texas contributes $.029 to the revenue per every mile he or she drives. Alabama

[33] See note 29.

[34] U.S. Department of Transportation, Federal Highway Administration, "Highway Statistics 2004: Disposition of State Motor-Vehicle and Motor-Carrier Tax Receipts – 2004," November 2005, http://www.fhwa.dot.gov/policy/ohim/hs04/hf.htm (accessed October 11, 2006).
U.S. Department of Transportation, Federal Highway Administration, "Highway Statistics 2004: Disposition of State Motor-Fuel Tax Receipts – 2004," November 2005, http://www.fhwa.dot.gov/policy/ohim/hs04/hf.htm (accessed October 11, 2006).

[35] Bureau of Transportation Statistics, "Table 5-3: Highway Vehicle-Miles Traveled (VMT)," 2005, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/html/table_05_03.html (accessed September 12, 2006).

recorded the lowest revenue/VMT with only $.013. Arkansas' revenue/VMT was $.018 in 2004. In all states, fuel tax revenue was the largest single source of state transportation funds.

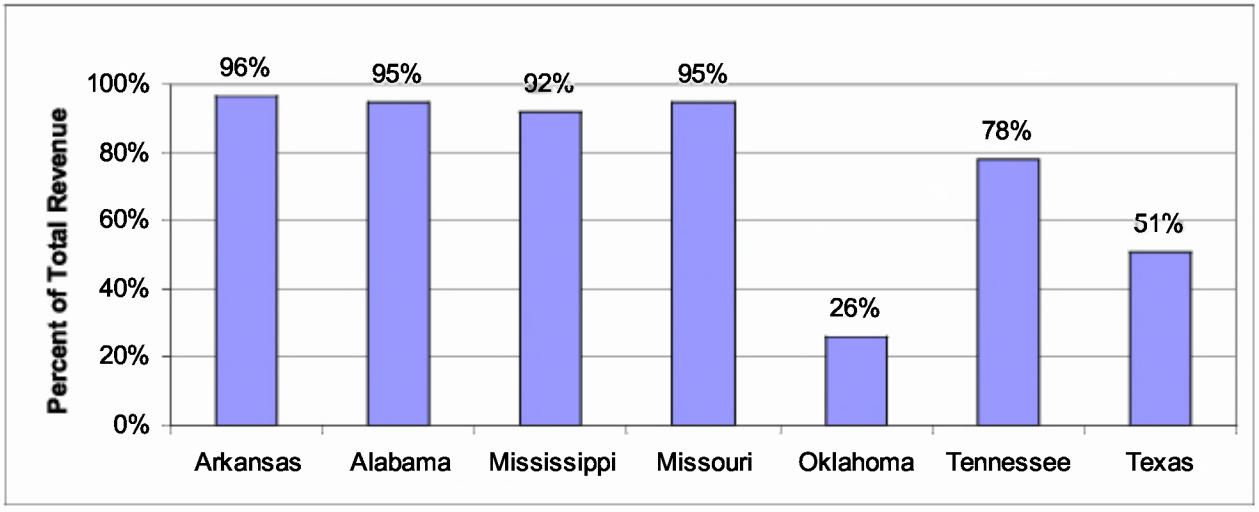
3.3. Comparison of the Disbursement of Revenue Generated by Fuel Tax and Registration and License Fees in Arkansas and its Neighboring States

This section compares the disbursement of revenue generated by fuel tax and registration and license fees in Arkansas to that of neighboring states. A large portion of that revenue is dedicated to fund transportation programs, but many states divert a portion to other purposes. The share of revenue from those sources dedicated to transportation is compared for each state in the study area.

3.3.1 Revenue Disbursement

In FY 2004, approximately 96 percent of Arkansas' fuel tax and registration and license fee revenue was dedicated to transportation purposes, which was the largest share among the selected states. The rest of the funds were diverted to general and nonhighway purposes and payments for collecting fees. The results of other studied states varied. Alabama, Mississippi, and Missouri similarly dedicated high amounts of fuel tax and registration and license fee revenue to transportation. In Oklahoma and Texas, a relatively large share of state revenue was diverted away from transportation. The states contributed only 26 and 51 percent respectively of their fuel tax and registration and license fee revenue to transportation. The share of revenue dedicated to transportation in Arkansas and its neighboring states is shown in Figure 3-12[36].

Figure 3-12. Share of Total Fuel Tax and Registration and License Fee Revenue Dedicated to Transportation in Arkansas and Neighboring States



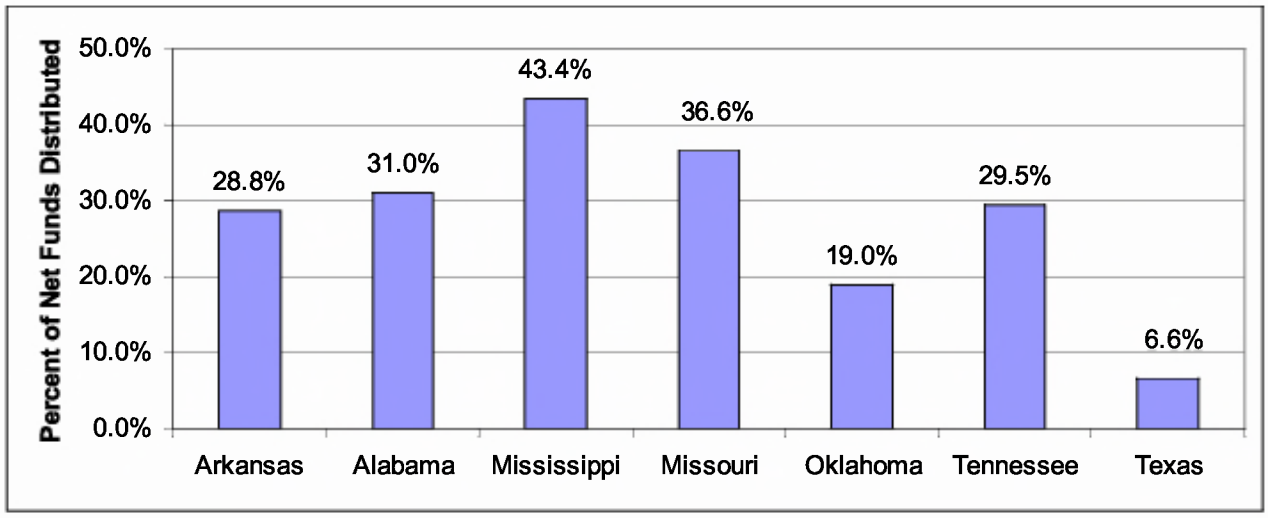
Many states allocate some amount of their revenue from fuel taxes and registration and license fees to local governments. That revenue is dedicated for transportation purposes and were therefore included in Figure 3-12. The distinction is important because the allocation of a share of fuel tax and registration and license fee revenue to local governments would diminish any positive fiscal

[36] See note 34.

impact that an increase in fuel tax rates or registration fees may have on state transportation revenue.

Figure 3-13 depicts the portion of motor fuel tax receipts and state motor vehicle and motor carrier tax receipts that was disposed for local roads and streets in the selected states in 2004. Disposition for local roads and streets includes direct expenditure by state and transfers to local governments. According to the Highway Statistics 2004 published by Federal Highway Administration[37], Mississippi and Missouri had the highest distributions for local roads and streets; they were 43.4 and 36.6 percent respectively. Arkansas's disposition was 28.8 percent. Texas with its 6 percent had the lowest disposition among the selected states in 2004. Appendix C details the legal provisions governing the disposition of State motor fuel tax receipts and the disposition of State motor vehicle, motor carrier, and driver license revenues for the selected states.

Figure 3-13. Share of Total Fuel Tax and Registration and License Fee Revenue Disposed for Local Roads and Streets



3.3.2. Dependency on Fuel Tax and Registration and License Fees

Transportation funding is usually supplemented by other taxes and fees. Examples include general and lubricant sales taxes, gaming taxes, and outdoor advertising permit fees. This section compares each state's dependence on fuel tax revenue and registration and license fees in funding transportation projects.

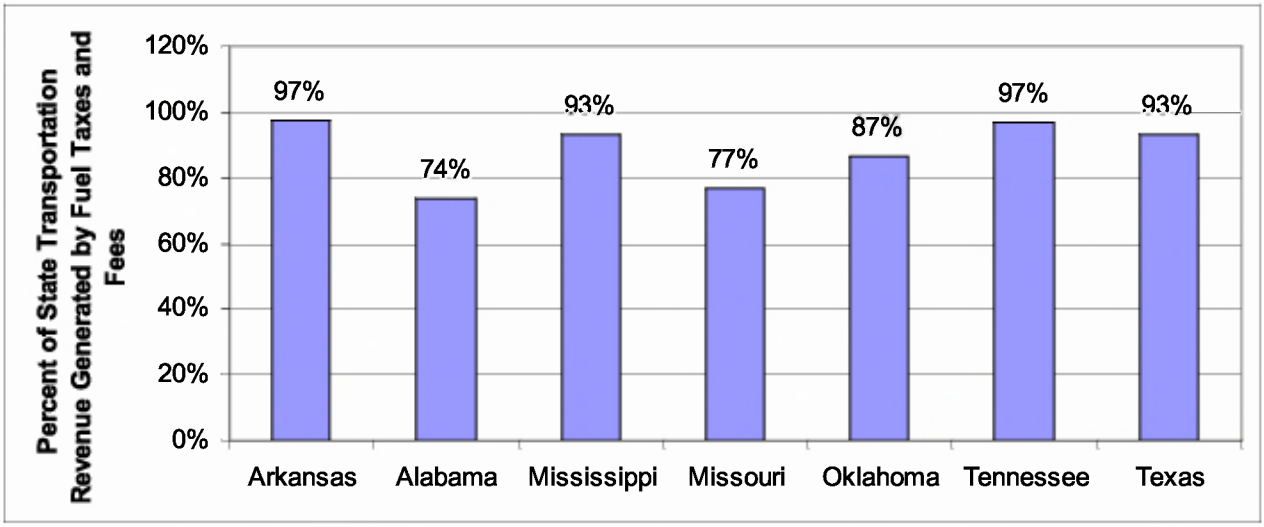
The extent to which Arkansas' state transportation revenue is dependent on fuel tax and registration and license fees is relatively high. In FY 2006, about 96 percent of Arkansas' state transportation revenue came from those sources. Additional transportation revenue was generated through interest on the State Highway Department (SHD) fund, title transfer fees, motor vehicle title fees, drive-out license fees, in transit fees, special permit fees, and other income.

Tennessee, Mississippi, and Texas were also heavily dependent on fuel tax and registration and license fees for state transportation revenue. Arkansas' remaining neighboring states were less

[37] See note 34.

dependent on those revenues for transportation finance. The estimated share of state transportation revenue generated from fuel tax and registration and license fees in Tennessee and its neighboring states is shown in Figure 3-14[38].

Figure 3-14. Dependence on Fuel Tax and Registration and License Fee Revenue for Transportation Revenue



[38] Data on transportation revenue and revenue disbursements were collected from the following states' departments of transportation: AHTD, MDOT, MoDOT, ODOT, TDOT, and TxDOT.
AHTD: Knighten Starnes (Arkansas State Highway and Transportation Department), e-mail to author, June 13-14, 2006.
ALDOT: Bill Flowers, (Alabama Department of Transportation), e-mail to author, June 2, 2006. Alabama Department of Transportation, "Receipts and Disbursements," Fiscal Year Ending September 30, 2005.
MDOT: J. Mark Valentine (Mississippi Department of Transportation), letter to author, July 17, 2006. Mississippi Department of Transportation, *Statement of Receipts and Disbursements for the Fiscal Year Ended June 30, 2005*, Annual Report, June 30, 2005, 45, http://www.mdot.state.ms.us/news/annual_reports/fy_2005_annual_report/default.htm (accessed June 2, 2006).
MoDOT: Mary Sue Fontana (Missouri Department of Transportation), e-mail to author, June 13, 2006. Missouri Department of Transportation, *Statement of Revenues, Expenditures, and Changes in Fund Balances – Governmental Funds, Year Ended June30, 2005*, and *Combining Statement of Revenues, Expenditures, and Changes in Fund Balances – Nonmajor Governmental Fund, Year Ended June30, 2005*, Accountants' Reports and Financial Statements, June 30, 2005, 21, 50.
ODOT: Cindy Wood, (Oklahoma Department of Transportation), e-mail to author, June 7, 2006.
TDOT: Lance Goad (Tennessee Department of Transportation), e-mail to author, May 18, 24, 26, 2006. Tennessee Department of Transportation, "Tennessee Department of Transportation, Work Program Comparison, FY 2003-2004 through 2005-2006," http://www.tdot.state.tn.us/GasTax/wpcomparison.htm (accessed May 16, 2006). Tennessee Department of Transportation, "Tracking Tennessee's 21.4-cent Gasoline Tax, Fiscal Year 2005-06," July 21, 2005, http://www.tdot.state.tn.us/GasTax/default.htm (accessed May 17, 2006). Tennessee Department of Transportation, "Tennessee Department of Transportation Work Program, FY 2005-2006," http://www.tdot.state.tn.us/chief_of_administration/finance-office/wp2006.htm (accessed May 17, 2006).
TxDOT: Glen Knipstein, (Texas Department of Transportation), e-mail to author, May 18, 23, 2006. Texas Department of Transportation, "Distribution of Total State Highway Fund Receipts, Fiscal Year Ended August 31, 2005," http://www.dot.state.tx.us/moneymatters/moneymatters.htm?pg=receipts (accessed May5, 2006). Texas Department of Transportation, "Summary of County Expenditures," http://www.window.state.tx.us/taxbud/expbyco05/counties/cntysum.html (accessed May5, 2006).

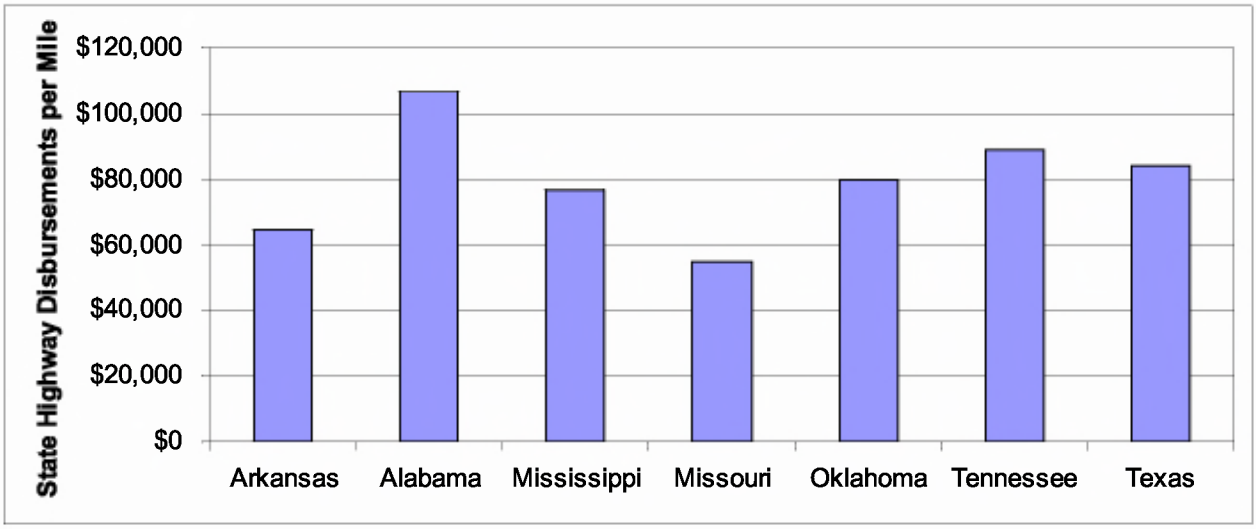
Alternative Sources of State Revenue

Alternate sources of revenue for neighboring states included permitting fees, vehicle rental fees, gaming fees (which were 7 percent of Mississippi's revenues in F.Y. 2005), sales and use taxes, restoration fees, penalties, capital lease, local revenues, and debt financing. Several states supplemented their current revenues with innovative financing sources. Texas, for instance, utilized TIFIA, Section 129 loan, SIB, P3s and tolls. SIB was also used in Arkansas, Missouri, and Tennessee. GARVEE bonds were issued in Arkansas, Oklahoma, Alabama and Mississippi. Alabama was another state in addition Texas that had toll revenue.[39] Diversifying the portfolio of the state's revenue base would decrease dependence on a few sources, and simultaneously increase and stabilize state transportation revenue over time.

3.3.3 Assessment of State Responsibilities

In 2004, Arkansas spent $1.0 billion on state-administered highways. This amount was used for capital outlay, physical maintenance, highway traffic services, administration and research, and highway law enforcement and safety. Texas outspent the studied states with approximately $6.7 billion. However, Alabama spent the largest amount per highway mile administered by a state highway agency. This amount added to $106,588 in 2004. The lowest amount spent per road mile was in Missouri with only $53,813 per road mile. Arkansas spent $64,343 per road mile in 2004. Comparative proportionate state disbursements for highways in 2004 are shown in Figure 3-15[40].

Figure 3-15. Disbursements for State-Administered Highways, 2004: Dollars per Road Mile



[39] Federal Highway Administration, *Innovative Finance: Quarterly,* Volume 11, Number 1, Fall 2005.

[40] U.S. Department of Transportation, Federal Highway Administration, "Highway Statistics 2004: Disbursements for State-Administered Highways – 2004," November 2005, http://www.fhwa.dot.gov/policy/ohim/hs04/pdf/sf4.pdf (accessed October 11, 2006).
U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-2: Public Road Length, Miles by Ownership: 2004,* State Transportation Statistics, December 2005, A-2, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

3.4. Conclusion

A review of Arkansas' transportation tax and fee structure and that of its neighboring states reveals that each state has a unique method for generating state transportation funds. Similarities include heavy dependence on fuel tax and registration and license fee revenue to generate state transportation funds. All states supplement those funds with additional taxes and fees.

Alternate sources of revenue include:

permitting fees	local revenues
vehicle rental fees	GARVEE
gaming taxes	SIB
sales and use taxes	TIFIA
restoration fees	Section 129 loan
penalties	tolls
capital lease	P3s

The benchmark analysis, reveals, however, many differences between Arkansas' approach to generating state transportation funds and the strategies of its neighboring states. State transportation revenue in Arkansas is more dependent upon fuel tax and registration and license fees than in many neighboring states. Approximately 97 percent of the states' revenue is generated from these taxes. Clearly, a state that generates revenue from a broader portfolio of sources can generate higher revenue but is also better positioned to withstand fluctuations in any one revenue source.

3.5. Additional State Transportation Statistics

This section is a statistical profile of transportation in Alabama, Arkansas, Mississippi, Missouri, Oklahoma, Tennessee, Texas, and the U.S. as a whole. A picture of the states' infrastructure, economy and finance is presented in the tables that have been updated with the most recent data available. The data were compiled by the Bureau of Transportation Statistics (BTS), a part of DOT's Research and Innovative Technology Administration (RITA).

Table 3-7. Public Road Length, Miles by Functional System: 2004[41]

	U.S. Total	AL	AR	MS	MO	OK	TN	TX
Interstate	46,573	904	656	685	1,181	931	1,105	3,233
Other principal & minor arterials	398,769	8,979	6,982	7,431	10,324	8,383	9,116	29,716
Major and minor collectors	790,038	20,416	20,269	15,440	24,819	25,307	17,861	63,559
Local	2,746,133	65,184	70,699	50,573	89,599	78,092	60,906	206,668
Total	3,981,513	95,483	98,606	74,129	125,923	112,713	88,988	303,176

Table 3-8. Public Road Length, Miles by Ownership: 2004[42]

	U.S. Total	AL	AR	MS	MO	OK	TN	TX
State highway agency	774,686	11,580	16,419	10,887	32,470	12,280	13,808	79,624
County	1,783,696	58,224	66,103	52,817	72,623	80,675	56,655	143,728
Town, township, municipal	1,236,239	24,122	13,759	9,544	19,763	18,487	17,590	78,991
Other jurisdiction *2	65,607	169	1	36	0	1,217	505	0
Federal agency *3	121,302	1,391	2,324	843	1,067	55	429	833
Total	3,981,530	95,486	98,606	74,127	125,923	112,714	88,987	303,176

*2 Includes state parks, state tolls, other state agency, other local agencies, and roadways not identified by ownership. *3 Roadways in federal parks, forests, and reservations that are not part of the state and local highway systems.

Note: The difference in total miles between Tables 3-7and 3-8 results from the Federal Highway Administration's (FHWA) expansion of sample data to derive estimates of road length by different variables. FHWA considers the length totals in Table 1-1 to be the control totals should a single value be required.

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[41] U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-1: Public Road Length, Miles by Functional System: 2004*, State Transportation Statistics, December 2005, A-1, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

[42] U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-2: Public Road Length, Miles by Ownership: 2004,* State Transportation Statistics, December 2005, A-2, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

Table 3-9. Toll Roads, Toll Bridges and Tunnels, and Toll Ferries: 2005[43]

	U.S. Total	AL	AR	MS	MO	OK	TN	TX
Toll road mileage	4,621.6	1.3	0	0	0	596.7	0.0	136.6
Number of toll bridges	174	3	0	0	2	0	0	24
Number of tunnels	14	0	0	0	0	0	0	1
Number of toll ferries	133	1	0	0	7	0	1	1

Note: Oklahoma ranks number two in the toll road mileage nationwide. Texas ranks number one in number of toll bridges.

Table 3-10. Road Condition: 2004[44]

	U.S. Total	AL	AR	MS	MO	OK	TN	TX
Very good	115,637	2,095	529	1,938	225	1,278	5,128	4,101
Good	249,259	7,528	4,257	4,694	6,813	6,303	6,915	18,411
Fair	382,547	10,903	10,490	10,201	13,678	11,293	4,648	45,100
Mediocre	102,643	2,444	3,750	2,781	4,320	3,327	485	7,213
Poor	68,353	813	1,435	1,385	5,324	4,560	261	1,994
Not Reported	4,329	0	64	0	1	318	0	179

Table 3-11. Number of Road Bridges by Owner[45]

	U.S. Total	AL	AR	MS	MO	OK	TN	TX
Federal	8,418	114	144	441	62	99	324	276
State highway agency	272,068	5,557	7,051	5,476	10,122	6,720	8,018	31,982
State toll authority	6,529	0	0	0	0	791	0	49
Other state agency	2,114	28	3	6	10	10	34	20
Local highway agency	298,295	9,915	5,256	10,884	13,561	15,694	11,304	16,362
Local toll authority	557	0	0	0	2	0	0	208

[43] U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-3: Toll Roads, Toll Bridges and Tunnels, and Toll Ferries: 2005,* State Transportation Statistics, December 2005, A-3, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

[44] U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-4: Road Condition: 2004,* State Transportation Statistics, December 2005, A-6, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

[45] U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-6: Number of Road Bridges by Owner,* State Transportation Statistics, December 2005, A-6, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

Other local agency	1,221	0	0	0	12	0	5	9
Private (including railroads)	1,479	34	4	33	21	1	1	14
Total	590,681	15,648	12,458	16,840	23,790	23,315	19,686	48,920

Table 3-12. Number of Road Bridges by Functional System: 2004[46]

		U.S. Total	AL	AR	MS	MO	OK	TN	TX
Urban	Interstate	27,444	555	341	235	615	462	711	3,166
	Other freeways and expressways	17,017	87	136	108	946	392	282	3,098
	Other arterial	48,971	860	684	444	637	991	1,779	5,306
	Collector	15,382	230	138	207	504	488	398	1,213
	Local	27,760	815	379	343	1,319	529	932	3,979
Rural	Interstate	27,486	607	459	530	415	646	654	3,086
	Other arterial	76,290	2,583	2,260	2,673	2,524	2,536	2,697	7,631
	Collector	143,066	5,635	5,016	4,567	5,159	7,435	5,434	11,302
	Local	208,262	4,275	3,046	7,733	11,672	9,837	6,800	10,169

Table 3-13. Road Bridge Condition[47]

	U.S. Total	AL	AR	MS	MO	OK	TN	TX
All Bridges	591,750	15,648	12,456	16,383	23,791	23,312	19,688	48,950
Structurally deficient	77,497	2,393	1,238	3,379	5,028	7,307	1,499	2,580
Functionally Obsolete	79,772	2,286	1,894	1,318	3,216	1,450	3,000	7,615
Total	157,269	4,679	3,132	4,697	8,244	8,757	4,499	10,195
Percent	26.6%	29.9%	25.1%	28.7%	34.7%	37.6%	22.9%	20.8%

Note: Some discrepancies exist between the total number of bridges reported in Tables 3-11, 3-12, 3-13 because of bridges not identified by one or more of the variables and other anomalies.

[46] U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-5: Number of Road Bridges by Functional System,* State Transportation Statistics, December 2005, A-5, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

[47] U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-7: Road Bridge Condition,* State Transportation Statistics, December 2005, A-7, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

Table 3-14. Motor Bus Transit Route Mileage: 2003[48]

		U.S. Total	AL	AR	MS	MO	OK	TN	TX
Directional route miles	Exclusive right-of-way	1,488.8	0	0	0	6.7	0	0	282.3
	Controlled right-of-way	1,312.7	0	0	0	3.8	0	0	33.4
	Mixed right-of-way	222,231.6	1,569.2	506.7	439.0	3,594.7	1,053.4	2,608.0	12,530.4

Note: Directional route-miles are a measure of the facility or roadway, not the service carried on the facility, such as the number of routes or vehicle-miles. Directional route-miles are computed with regard to direction of service, but without regard to the number of traffic lanes or rail tracks existing in the right-of-way. Exclusive right-of-way refers to lanes reserved at all times for transit use and other high occupancy vehicles (HOVs). Controlled right-of-way refers to lanes restricted for at least a portion of the day for use by transit vehicles and other HOVs. Mixed right-of-way refers to lanes used for general automobile traffic. Route-miles are assigned to the state of the transit agency's headquarters.

[48] U.S. Department of Transportation, Bureau of Transportation Statistics, *Table 1-8: Motor Bus Transit Route Mileage: 2003*, December 2005, A-8, http://www.bts.gov/publications/state_transportation_profiles/state_transportation_statistics_2005/ (accessed May 15, 2006).

Chapter 4

Innovative Finance

This chapter discusses financing alternatives that depart from the traditional pay-as-you-go sources intended to supplement fuel taxes and registration fees. While the opportunity exists to merely raise the rates on existing funding sources, the focus in this discussion is upon innovative funding strategies that complement and enhance existing grant reimbursement programs.

4.1. Way to Innovation

4.1.1. Funding Gap

The Federal Aid Highway Act of 1956 created the Highway Trust Fund, providing a stable funding source for the nation's highway system which was adequate for the next 15 years. The Trust Fund receives revenue from a variety of highway-related taxes, approximately 85 percent of which are taxes on motor fuel (gasoline and diesel). In the early 1970s, the Trust Fund encountered a series of structural problems. It experienced a growing disparity between the costs of essential transportation improvements and preservation and the available revenues to fund these activities. Over time, the federal highway-finance program changed and it now has many characteristics of a block-grant program. According to Giglio, funds are being distributed as broadly as possible, with little relationship to transportation demand or specific national objectives.[49]

4.1.2. ISTEA, TE-045, and TEA-21

To close the funding gap, efforts have been made to augment traditional public funding sources by using innovative financing strategies and tapping private sector resources. The passage of The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) introduced several new concepts designed to increase transportation investment levels by encouraging the use of user fees. The Act created a loan program, in which states could lend federal funds to toll projects and permitted certain toll revenue expenditures to serve as a credit against non-federal matching requirements. In 1994, "Innovative Financing Program" (TE-045)[50] was passed to expand the opportunities of ISTEA as well as some of the other financing tools developed by the private sector and other states. The Act was augmented by The National Highway System Designation Act of 1995 which established a State Infrastructure Bank (SIB) Pilot Program, permitting certain states to use federal highway funds to capitalize a transportation revolving fund. It also increased the federal matching ratio for toll projects, expanded the opportunity for states to retire the costs of debt financing with future federal aid, allowed loans of federal aid to non-toll projects and broadened the types of funding commitments eligible to satisfy nonfederal matching requirements. Another forward looking landmark bill was The Transportation Equity Act for the 21st Century (TEA-21). TEA-21 enacted the Transportation Infrastructure Finance and Innovation Act (TIFIA) to provide up to $10.6 billion in credit assistance to major projects of national significance. It also continued the SIB pilot program in a limited form, with additional capitalization opportunities

[49] Joseph M. Giglio, *Mobility: America's Transportation Mess and How to Fix It* (Washington D.C., Hudson Institute, Inc., 2005), 85.

[50] The PBS&J Consultant Team, "Draft Report: Tennessee Long-Range Transportation Plan: Financial Plan," August 2005, http://www.tdot.state.tn.us/plango/pdfs/plan/Financial.pdf (accessed May19, 2006), 4-1.

available only to four states and provided additional flexibility in nonfederal matching share requirements.[51]

4.1.3. SAFETEA-LU

On August 10, 2005, the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). With guaranteed funding for highways, highway safety, and public transportation totaling $244.1 billion, SAFETEA-LU represented the largest surface transportation investment in the nation's history.[52] SAFETEA-LU builds on ISTEA and TEA-21 firm foundation, supplying the funds and refining the programmatic framework for investments needed to maintain and grow transportation infrastructure. SAFETEA-LU makes it easier and more attractive for the private sector to participate in highway infrastructure projects, bringing new ideas and resources to the table. Innovative changes such as eligibility for private activity bonds, additional flexibility to use tolling to finance infrastructure improvements and broader TIFIA and SIB loan policies, all will stimulate needed private investment. SAFETEA-LU gives states more flexibility to use road pricing to manage congestion and promotes real-time traffic management in all states to help improve transportation security and provide better information to travelers and emergency responders.[53]

While SAFETEA-LU contains many beneficial programs, it has been pointed out that the available funds for disbursement get diluted. Programs such as Transportation Enhancement Activities, the Recreational Trails program, various discretionary programs, and a multitude of demonstration project earmarks take needed funds away for the core formula programs targeted at addressing the nation's mobility challenge. As a result, transportation planning and funding process may be disrupted and caused delays in progress on higher priority projects and programs needed to identified mobility needs. Additionally, since January, the federal government has required all states to return billions in promised funding to help offset spending on major items like the wars in Iraq and Afghanistan and hurricane relief.[54]

4.1.4. Project Finance Tools

Innovative financing is meant to supplement, not replace, traditional financing methods. It is used to achieve a set of nonmutually exclusive objectives for project implementation. The primary objectives of innovative finance are to:

Maximize the ability of states and other project sponsors to leverage federal capital for needed investment in the nation's transportation system.

More effectively utilize existing funds.

Move projects into construction more quickly than under traditional financing mechanisms, and

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[51] Federal Highway Administration, U.S. Department of Transportation, "Innovative Finance Primer," April 2002, http://www.fhwa.dot.gov/innovativeFinance/ifp/ifprimer.pdf (accessed May 19, 2006), 1.

[52] Although the funding amount increased, not every state's discretionary funds grew in proportion with the overall increases.

[53] Federal Highway Administration, Office of Legislation and Intergovernmental Affairs, Program Analysis Team, "Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users: A Summary of Highway Provisions," August 25, 2005, http://www.fhwa.dot.gov/safetealu/factsheets/factsheets-safetea-lu.pdf (May 19, 2006), 2,3.

[54] Ric Williamson, "The Federal Surface Transportation System: Options for the Future," Horizon, Fall 2006, 43.

Make possible major transportation investments that might not otherwise receive financing. The financing techniques shown in Table 4-1[55] are classified by four broad categories that employ specific strategies.

Table 4-1. Financing Techniques

Classification	Strategies
Innovative Management of Federal Funds	Advance Construction Partial Conversion of Advance Construction Tapered Match Flexible Match Toll Credits
Debt Financing	Grant Anticipation Revenue Vehicles (GARVEEs)
Credit Assistance	Section 129 Loans State Infrastructure Banks (SIBs) Transportation Infrastructure Finance and Innovation Act (TIFIA)
Tolling	General Toll Provisions Interstate Reconstruction and Rehabilitation Program Value Pricing Pilot Program

There are six basic techniques that are referred to as "innovative financing." They supplement traditional transportation financing methods and are discussed in more detail in the next section.

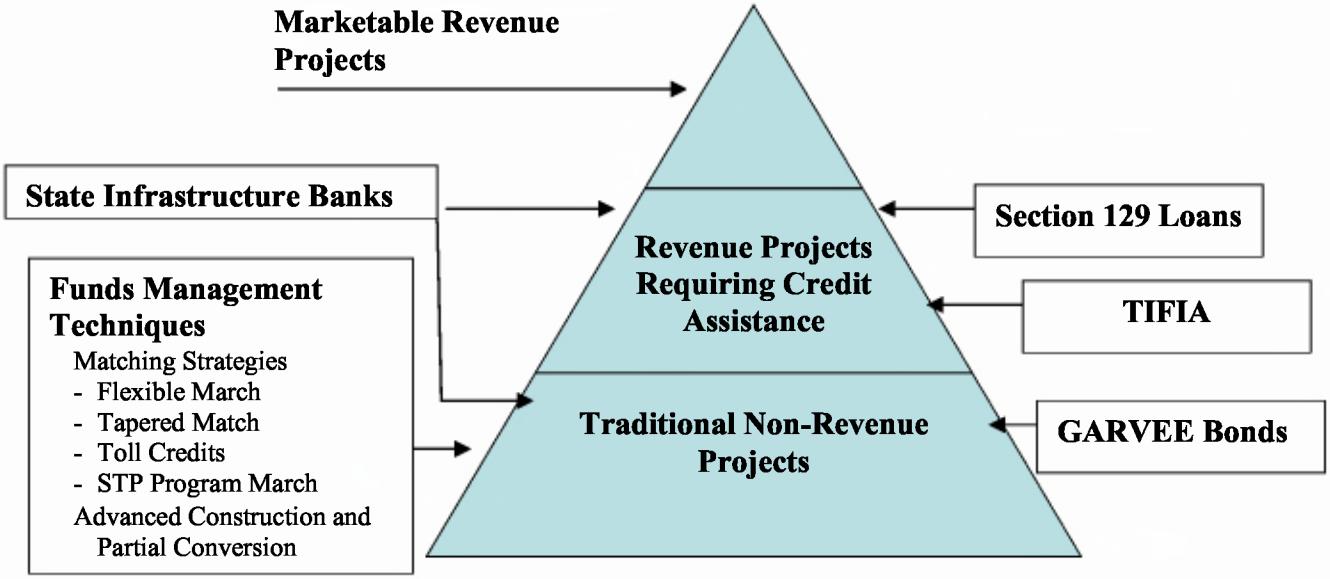
> Enabling state and local transportation agencies to issue **GARVEE** bonds against future expected Highway Trust Fund receipts to speed the flow of funds, particularly to fund larger projects.
> Establishing **SIBs** to pool available public funding resources for needed transportation programs and projects at both the state and local levels.
> Using **TIFIA**-enabled credit enhancements and loan guarantees to reduce the costs of borrowing to pay for needed transportation investments.
> Tapping local developers to make contributions in land or funds to expedite needed transportation projects through impact fees, land contributions, and funding contributions.
> Applying **tolls** (direct user fees) to pay for the costs of projects paid up-front by revenue bonds.
> Using **public-private partnerships** to expedite major transportation projects through the cooperative involvement (such as design-build project development) and contributions by both public and private sector project sponsors.[56]

These project management tools may be depicted by a financing pyramid. Figure 4-1[57] summarizes the various innovative financing techniques associated with federal assistance for surface transportation projects. The pyramid's shape reflects the number of projects in each funding

[55] See note 50, 4-2.
[56] See note 50, 4-2, 4-3.
[57] See note 50, 4-2.

category. The base of the pyramid represents the vast majority of projects that cannot generate revenues and, therefore, will continue to be dependent upon funding primarily through grants. The federal government has adopted enhanced fund management techniques, such as advance construction and grant-supported debt service to help move these projects to construction more quickly. When circumstances support the advisability of debt financing (as opposed to pay-as-you-go grant funding), these projects are prime candidates for GARVEE-style debt instruments in which future federal highway apportionments are used to pay debt service and other debt-related costs.

Figure 4-1: Project Finance Tools



The middle layer of the pyramid (approximately 5-10 percent of total capital investment) represents those projects that can be at least partially financed with debt payable from project-related revenues, but which also may require some form of public credit assistance to gain market access. The SIB can offer many types of assistance (e.g., lower interest loans, guarantees, and other credit enhancements to local or regional projects with revenue streams). State loans of federal grant funds, known as Section 129 loans, are another possibility. The federal credit program established under the TIFIA, on the other hand, is designed to assist large-scale projects generating major economic benefits that might otherwise be delayed or not constructed at all because of their risk, complexity, or cost.

The peak of the pyramid represents the very small number of projects that can arrange private capital financing without any governmental assistance. These relatively few projects may be developed on high-volume corridors where the revenues from user charges are sufficient to cover capital and operating costs.[58]

[58] See note 50, 4-2, 4-3.

4.2. GARVEE

Some transportation projects or programs of projects are so large that their costs exceed available current grant funding and tax receipts, or would consume so much of these current funding sources as to delay many other planned projects. For this reason, when states and local agencies consider ways to pay for these large projects, they often look to financing the projects through borrowing. Grant Anticipation Revenue Vehicle (GARVEE) bonds offer states an innovative way to assemble up-front capital by allowing a state to pledge future federal aid funds to repay investors. The candidates for GARVEE financing should be large enough to merit borrowing rather than pay-as-you-go grant funding, with the costs of delay outweighing the costs of financing. They do not have access to a revenue stream and other forms of repayment are not feasible and the sponsors are willing to reserve a portion of future year federal aid highway funds to satisfy debt service requirements. In addition, candidate projects must be eligible for federal aid highway funding under one or more program funding categories for which advance construction is available.[59]

4.2.1. Reimbursement Possibilities

There are two possibilities for reimbursements on GARVEE-financed projects. Federal reimbursement of debt service can be matched up front or on a payment-by-payment basis. When it is matched up front, it is acceptable for the state match to be provided as an in-kind match (under the flexible match provisions) or with toll credits. In the latter case, the state would provide its matching contribution on a nominal, current-year basis, with each debt service payment matched at the proper pro rata share.

Costs eligible for reimbursement include the following: Interest payments and retirement of principal (including any capitalized interest) under an eligible debt financing instrument; Issuance costs (including but not limited to underwriters' discounts, rating agency fees, fees paid to financial advisors and bond counsel, and printing costs) and credit enhancement fees (such as bond insurance premiums); and Any other related incidental costs as determined by the Secretary (including ongoing trustee fee and audit costs).[60]

4.2.2. Revenue Pledge

The type of revenue pledge largely determines how GARVEE-financed projects will be viewed by the financial markets. Non-Recourse GARVEEs -- when states may elect to pledge their obligations of future federal aid funds as the only security backing the federal share of the obligation to investors -- may carry higher interest rates and therefore be more expensive than recourse financings.[61]

With back-stopped GARVEEs, states may elect to pledge other sources of revenue as security for the future federal aid funds, such as state fuel tax revenues or local property taxes. This will generally result in lower interest costs on the bonds.[62]

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[59] See note 51, 15, 16.
[60] See note 51, 16.
[61] Recourse financing may be defined as financing in which the right of recourse to the party receiving funds is forfeited to the party advancing funds. This may be evidenced by conditions added to the endorsement of a draft being sold by an exporter in order to protect the exporter, if the instrument is not paid at maturity by the original obligor.
[62] See note 51, 17.

4.2.3 GARVEE in Practice

As shown in Figure 4-2, as of November 2005 GARVEE bond transactions have been issued in 14 states and two U.S. territories and totaled $4.8 billion.[63]

Figure 4-2. GARVEE Issues as of November 2005

4.2.4. Pro and Cons of GARVEE Bonds

Bond financing allows a project to be built more quickly and can be more cost-effective by avoiding project cost escalations due to a prolonged construction period. Furthermore, bond financing can provide road users with benefits faster than what would be possible with traditional financing.

GARVEE bonds also contain some unique characteristics that need to be considered when choosing between different financing options.

The state does not have to use its own funds to fully support a project, as required with highly rated General Obligation (GO) bonds.

A GARVEE bond may get a higher credit rating than a GO bond due to the proportion of federal funds specified for debt payment.

A GARVEE bond may be used as a financing technique when a revenue stream is not available for the project as it would be with revenue bonds.

Indirect GARVEE bonds allow a project or a group of projects to be funded with federal funds without being subject to various federal requirements attached to the use of such funds.

[63] Federal Highway Administration, "GARVEE Roundup," FHWA's Innovative Finance: Quarterly, Volume 11, Number 1, Fall 2005, 5

The GARVEE program is not limited to any type of project as long as it is eligible for federal aid funding.

Since there is no guarantee of anticipated future federal funds and subsequent repayments, GARVEE bonds are riskier than GO bonds. Consequently, GARVEE bonds create some interest and issuance costs and can be more costly than GO bonds.

Examples of states with GARVEE bond experience are: Alabama, Alaska, Arkansas, Arizona, California, Colorado, Kentucky, Ohio, Oklahoma, Mississippi, Montana, New Mexico, North Dakota, and Rhode Island.[64]

4.3. State Infrastructure Banks (SIBs)

SIBs are a close relative of revolving loan funds, as they can lend money to an initial group of projects and then use the subsequent repayments to fund a future generation of loans. However, SIBs can also provide credit enhancement products (such as lines of credit and payment guarantees) in addition to loans. Consequently, states obtain the capacity to increase the efficiency of their transportation investment and significantly leverage federal resources by attracting non-federal public and private investment.[65]

4.3.1. SIBs Requirements

Designed to complement traditional transportation funding programs, SIBs can give states significantly increased flexibility in project selection and financial management. Much like a private bank, a SIB uses seed capitalization funds to get started and offers customers a range of loans and credit enhancement products. States can enter into a cooperative agreement with the FHWA that provides the framework for SIB implementation, including the basic structure and purpose of the SIB, the roles of each party, the administration of funds, and reporting and audit requirements. While the authorizing federal legislation establishes basic requirements and the overall operating framework for a SIB, states have the flexibility to tailor the bank to meet state-specific transportation needs. A critical step in implementing a state SIB is ensuring that there is legal authority to achieve the intended objectives of the program.

SIBs can provide financial support to both public and private sponsors of eligible transportation projects and can assist in financing any stage of the project's development. There are no federal share restrictions on the cost of projects eligible to receive SIB assistance.[66]

4.3.2. SIBs Credit Assistance

SIBs provide two principal forms of credit assistance: Loans and credit enhancement products.

Loans. Loans are the most common form of assistance offered by SIBs. The primary benefit of providing loans to projects is that loan repayments are recycled for future generations of projects. Each SIB has the flexibility to structure loans specifically to meet an individual project's needs by offering below market interest rates and favorable repayment terms. Types of loans that SIBs can

[64] See note 39, 5.
[65] See note 51, 22.
[66] See note 51, 22.

offer include subordinate loans, short-term construction loans, and interest-only loans during construction periods.

Alternative forms of loans, such as Grant Anticipation Notes (GANs) and similar short-term debt instruments, can be issued in anticipation of future revenues, including federal reimbursement of state transportation expenditures and state appropriations. For example, the SIB could issue GARVEEs or GANs in the private capital markets on behalf of project sponsors or as a method of capitalizing the SIB.

Credit Enhancement. States have broad discretion as to the kinds of credit enhancement products they wish to offer, such as interest rate subsidies, lines of credit, bond insurance and provision of capital reserve funds. Credit enhancement products, which are offered through a SIB can provide additional security or credit support to transportation projects that are funded primarily through other means, such as the municipal bond market or private participation. The additional security provided by credit enhancement can result in higher investor confidence which in turn creates lower interest rates, improved marketability of bonds, and lower overall project financing costs. From a statewide perspective, therefore, providing credit enhancement through a SIB can be more advantageous than providing direct loans because fewer resources are tied up and more projects can be assisted.

The federal government places very few constraints on the terms that it attaches to individual loans or credit arrangements offered by a SIB. This means that each SIB determines what types of credit products to offer, what interest rates to charge, how to screen applicants, and other matters related to the day-to-day business of the SIB. There is also discretion to determine what forms of repayment are acceptable. Even though it is desirable for a SIB to introduce new revenue streams (such as toll receipts) into the pool of funding available for transportation investment, it is possible for SIB loans to be repaid with existing state resources or even federal funds.

Although the federal government gives states discretion to establish most credit terms, U.S. DOT requires that most SIB-assisted projects comply with the regulations that apply to grant-funded projects. All projects that receive so-called "first round" assistance - meaning loans or other credit support that derives from the initial federal capitalization grants - must comply with these regulations. During the first round of assistance with federal capitalization funds, SIBs may not provide project sponsors with grant funding.[67]

4.3.3. Establishing SIBs

Before a state can offer financial assistance to surface transportation projects through a SIB, it must first take the appropriate steps to establish and capitalize the bank. States may need to adopt specific enabling legislation to authorize the creation of a SIB. The types of assistance offered by a SIB will depend on the specific transportation financing needs of a particular state and the statutory authority given each SIB.

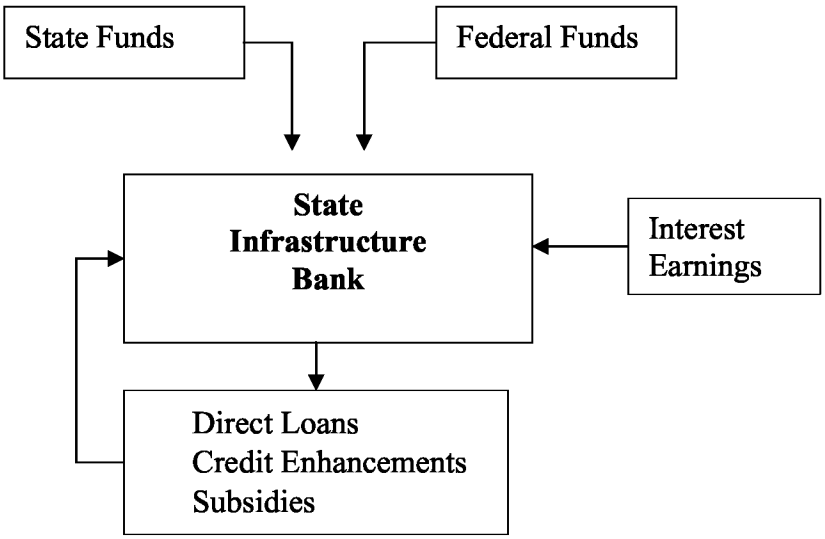
The critical feature of a SIB established under the federal pilot program, and a key distinction from the TIFIA program, is that it is capitalized with federal funds but operated by the administering

[67] See note 51, 22, 23.

state. The administration and operation of the SIB can be located within the state DOT, in an independent entity, or split between multiple agencies. Typically, the organization responsible for the SIB's daily operations is overseen by another entity, such as an appointed transportation commission.

Figure 4-3[68] illustrates the basic structure of a SIB. The structure is designed to allow for initial seed capital to be used to supply loans and credit enhancements on a revolving basis to eligible surface transportation projects. Many states are adding their own money to federal funds to enhance the effectiveness of the SIB. States were required to match the federal monies with funds from nonfederal sources. States can choose to contribute funds in excess of the required state match.[69]

Figure 4-3. CIB Capitalization, Lending, and Repayment Process



4.3.4. SIB Structure

SIBs can be structured either with leverage or without. A "leveraged SIB" would issue bonds against its initial capitalization, significantly increasing the amount of funds available for loans. Rather than loaning federal funds and state matching funds, these funds together with anticipated loan repayments can be pledged as security for the bond issue. The proceeds from the debt issuance can then be provided to project sponsors as either loans or credit enhancements. This approach makes sense when demand for SIB assistance is greater than the cash available in the bank for loans.

An "unleveraged SIB" would simply lend available funds or provide credit enhancement to projects. The loan repayments would then be recycled for funding future projects, but there would be a time lag before the SIB would be replenished through repayments from its original borrowers. In order to maximize replenishment of a SIB, some state DOTs have limited borrowings to short-term loans.

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[68] See note 51, 23.
[69] See note 51, 24.

The decision of whether or not to leverage will depend on the assessment of overall loan demand and policies relative to bond financing. A state may need specific state-legislated authority to issue SIB loans. In practice, the leveraging decision may be made later in the SIB's life cycle when loan demand can be more easily identified and quantified. States also have the option, if demand for SIB financial assistance exceeds the initial federal and state capitalization monies, to contribute additional state funds above the required match. While most SIBs are unleveraged, leveraging is a viable alternative for states to facilitate a larger dollar investment in transportation. For leveraged SIBs, credit and rating considerations will be factors in the overall SIB structure.[70]

4.3.6. SIB in Practice

As of June 30, 2005, 33 states and one territory had entered into 457 SIB loan agreements with a total dollar value of $5.1 billion. As shown in the Table 4-2, while the use of SIBs is widespread across the United States, nearly 92 percent of the dollar amount of all SIB loans is concentrated in six states. South Carolina leads the nation in the value of SIB loan agreements, with a total of over $2.6 billion committed in eight agreements. Much of that money has been made available to the SIB through the South Carolina Department of Transportation. Other states with significant SIB activity include: Florida, Arizona, Texas, Ohio and Minnesota. SIB activity in these sates is summarized in Table 4-2.

Table 4-2. SIB Loan Agreements by State -- Most Active SIBs through June 30, 2005

Rank	State	Number of Loans	Loan Agreement Amount ($000)
1	South Carolina	8	2,605,000
2	Florida	50	867,000
3	Arizona	49	564,000
4	Texas	54	277,237
5	Ohio	70	221,739
6	Minnesota	17	102,776
Subtotal		**248**	**$4,637,753**
		54.3%	**91.5%**

SIB Web Resources

Arizona - http://www.dot.state.az.us/about/help/index.htm
Florida - http://www11.myflorida.com/financialplanning/sib.htm
Michigan - http://www.mdot.state.mi.us/programs/sibank/
Minnesota - http://www.oim.dot.state.mn.us/TRLF/
Ohio - http://www.dot.state.oh.us/sib1/
Oregon - http://www.odot.state.or.us/fsbpublic/otib.htm
Texas - http://www.dot.state.tx.us/revexp/sib/sibtoc.htm
Vermont - http://www.aot.state.vt.us/planning/sibinfo.htm[71]

[70] See note 51, 24.
[71] See note 51, 25.

4.3.5. Pros and Cons of SIBs

SIBs allow states to leverage existing resources. They can build more projects with fewer dollars and accelerate project construction, especially for projects where economic benefits can be identified and captured. This approach ameliorates the impact of inflation on construction costs and helps to realize project benefits earlier.

By offering an array of financing tools such as low-interest loans, refinancing, subordinated debt instruments, and construction financing, the SIB can tailor financing packages to meet specific project needs and provide increased flexibility. SIBs can facilitate projects that are financially tenuous by providing credit support through lines of credit or bond insurance. Equally important, the availability of a menu of financing tools coupled with the ability to offer subordinate debt financing can attract both nontraditional private capital and local government resources, further enhancing a state's ability to leverage scarce transportation resources.

It gives the states the opportunity to develop their own self-renewable, insulated source of future capital. SIBs have the ability to recycle resources by re-loaning funds as they are repaid. The repaid funds essentially become state resources. This means that, in addition to increased leverage and additional flexibility, states have the opportunity to develop and control their own source of capital.

SIB can gain greater leverage by issuing debt against the bank's capital so that even more funds can be made available for lending. This accelerates the recycling of loan repayments, increases the magnitude of available transportation resources and provides for a larger financial pool with which a state can work.

The SIB approach keeps the main responsibility for planning, funding and implanting infrastructure restoration at the state and local levels, where needs are best understood and can be handled more expeditiously.[72]

Many aspects of a project, from planning through construction, qualify for assistance from the SIB.

Establishing a SIB, however, can be a complex process. Legislation that would allow the existence of a SIB in a state must be passed and the state must establish the process by which the program is funded and the funds are distributed.[73]

4.4. TIFIA

The TIFIA program provides federal credit assistance – loan, loan guarantee, or a line of credit -- to nationally or regionally significant surface transportation projects, including highway, transit, and rail. This program was established in TEA-21 to fill market gaps and leverage substantial private coinvestment by providing projects with supplemental or subordinate debt. SAFETEA-LU authorizes a total of $610 million through 2009 to pay the subsidy cost (similar to a commercial bank's loan reserve requirement) of supporting federal credit under TIFIA. To encourage broader use of TIFIA financing, the threshold required for total project cost is lowered to $50 million ($15 million for intelligent transportation systems projects), and eligibility is expanded to include public freight rail facilities or private facilities providing public benefit for highway users, intermodal

[72] See note 49, 109, 110, 129.

[73] Texas Department of Transportation, "Open to Regional Mobility Authorities," TxDOT: Open For Business, A Guide to Accelerating Transportation Projects, June 2006, 15.

freight transfer facilities, access to such freight facilities, and service improvements to such facilities, including capital ITS.[74]

4.4.1. TIFIA Requirements

Various highway, transit, rail, and intermodal projects are eligible for credit assistance under TIFIA. The credit assistance requirements refer mostly to eligible project costs, rather than the project itself. TIFIA defines eligible project costs as expenses for the following activities:

- Development (activities such as planning, feasibility and environmental studies, preliminary engineering and design, etc.);
- Construction (property and equipment acquisition, environmental mitigation); and
- Financing (capitalized interest, cost of insurance, and reserve funds).

Any expenses related to the application process for credit assistance are not eligible project costs. Each project must meet certain threshold criteria to qualify for the TIFIA Program:

The total eligible project cost should be at least $100 million or 50 percent of the state's annual federal apportionment (whichever is less).

The application form for TIFIA assistance should be submitted to the U.S. DOT. The project should be included in the state's Transportation Plan and approved in the state's Transportation Improvement Program.

The project should be repayable from dedicated revenue sources (fees, tolls, etc.).

The project must receive public approval if private sponsorship is present.

In addition, TIFIA assistance cannot exceed 33 percent of the eligible costs of a project, which means that in all cases the federal government would act as a minority investor.

The U.S. DOT also requires each applicant to provide an investment grade credit rating opinion letter from at least one nationally recognized bond-rating agency. The senior debt obligations of a project must meet the requirements to obtain the investment grade rating. TIFIA borrowing is subordinate to this senior debt. The initial evaluation of applications is based on several assumptions, pending a feasibility study, record of decision (described later in this section), mix of project, and debt to equity, etc.

A rating agency must also provide its opinion on the default risk of the TIFIA credit instrument as well. The U.S. DOT uses the assessment of the default risk to revise its initial estimate of the budget authority needed to cover credit losses. All TIFIA assistance is provided on a competitive basis. The time from the submission of a letter of interest until the actual disbursement of federal funds involves a long, multistep process. This process is illustrated in Figure 4-4. Careful project selection and thorough preparation by the state to justify its eligibility are very important.

The steering committee's selections are based on several criteria, such as generated economic benefits, participation of private capital, and use of new technologies, creditworthiness, project acceleration, budgetary cost, and reduction of grant assistance. Each criterion is assigned a certain weight that represents its significance in project selection. The three main criteria for project selection are defined as its "national or regional significance," "environmental impact," and "participation of private capital."[75]

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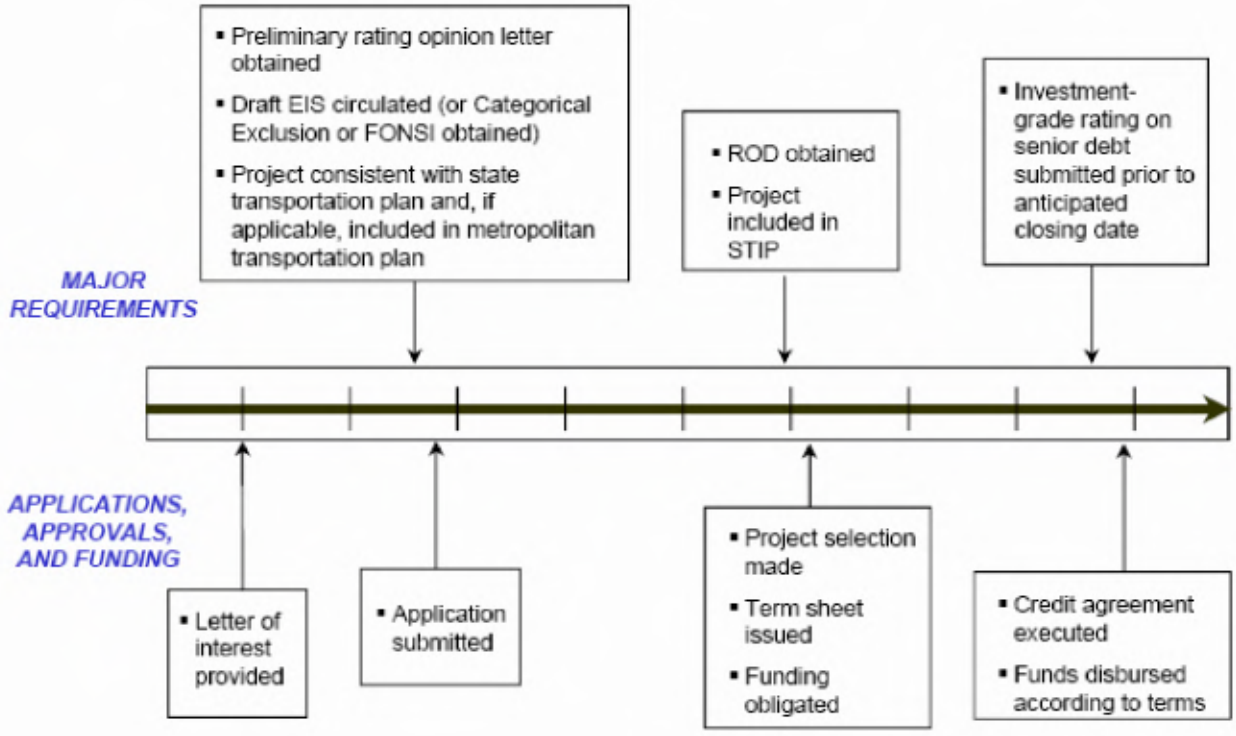
[74] See note 53, 7.
[75] See note 51, 26, 27.

Figure 4-4. TIFIA Documentation Requirements[76]



4.4.2. TIFIA Credit Instruments

There are four stages in the typical lifecycle of a transportation project. The first stage – the development phase – involves engineering, financial, and environmental feasibility studies. In this stage, necessary approvals are secured as preconditions for construction in this stage. In the second stage – the construction phase – the projects are subject to different type of risks, i.e., cost overruns, environmental, performance, etc. In the ramp-up phase -- the third stage of the project – anticipated revenue streams are established and adjusted. The project maturity phase is the final phase of the project. In this phase, it must be determined that a project will generate enough revenues over the long-term period to cover its capital and operating expenses. For large, capital-intensive projects, a period of 30 years or longer is often required to fully recover the initial investment. There are three credit instruments that can be used during different project phases: direct federal loans, loan guarantees, and lines of credit.

Direct Loans. A debt obligation from the federal government to a project sponsor, providing long-term, fixed-rate permanent financing is a direct loan. Such loans may be issued for an amount up to 33 percent of the project's cost and can have a final maturity date no longer than 35 years after completion of construction. However, repayment may be deferred up to 10 years. The interest rate is charged at the prevailing treasury rate for similar maturities, and the interest accrues for any deferred payment. The specific terms and conditions of each loan is negotiated between the federal government and the borrower. In the case of a default leading to bankruptcy, insolvency, or

[76]Keith Bishop (TIFIA: Joint Programs Office, USDOT), and Roth Alexander (RRIF: Federal Railroad Administration). *Federal Credit Assistance Applicable to Freight Projects* (Seattle, Washington: Federal Financial Tools Workshop: Financing Freight in the Pacific Northwest, June 20, 2006), slide 4.

liquidation, the U.S. DOT must have a parity or coequal claim on project assets with other investors. The loan also can be prepaid at any time without penalty from excess revenues.

Loan Guarantees. The loan guarantee offered by TIFIA is intended to facilitate senior project borrowing by guaranteeing a junior loan made by investors. A junior loan (or subordinated loan) is debt that is either unsecured or has a lower priority for repayment. A loan guarantee has basic features similar to a direct loan. The principal amount of the loan guarantee cannot exceed 33 percent of the project costs. The final maturity of the loan can be no longer than 35 years. The interest rate can be negotiated between the lender and the borrower, and interest payments would be subject to federal income taxation. The guarantee loan must be secured with defined claims on project revenues. Since it will receive a higher credit rating at a taxable yield level, a loan guarantee should help attract participation by investors who are capitalized well enough to absorb the liquidity and time horizon risks. Use of loan guarantees could encourage the development of a junior-lien private market over time.

Standby Lines of Credit. Under TIFIA, a standby line of credit represents an agreement between the federal government and the project sponsor to make one or more direct loans in the future if there is a need to fund revenue shortfalls. It is a supplementary instrument that can be used in the early years of operation (ramp-up phase). There are some characteristics of a standby line of credit that distinguish it from the previous two credit instruments: 1) The line of credit can be assessed only after the project is completed and remains open for the next ten years; 2) The borrower can draw down a maximum 20 percent of the line annually, and the total amount borrowed cannot exceed 33 percent of the total project costs; 3) The interest rate is established at a rate equal to the 30-year U.S. Treasury rate. The federal line of credit can be useful when toll operation revenues are not sufficient to cover the debt service, to cover the costs of extraordinary repair, operating and maintenance expenses, or capital expenditures.[77]

4.4.3. TIFIA in Practice

The map in Figure 4-5 illustrates projects that were funded through TIFIA loans. Total TIFIA assistance up to date is $3.2 billion and total project investment amount equals $12.7 billion.[78]

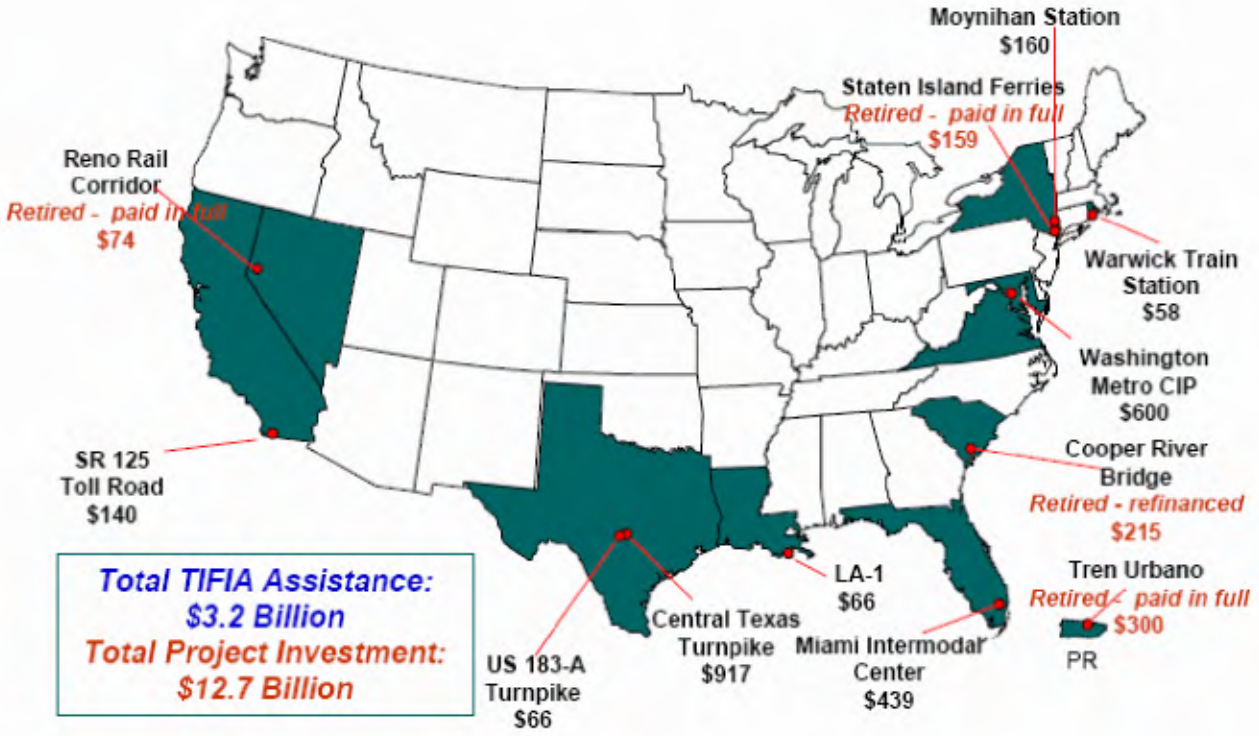
4.4.4. Pro and Cons of TIFIA Program

The TIFIA program offers the following financing benefits:

- It provides a significant funding source (33 percent of total project cost) in the form of credit instruments, thereby increasing the likelihood of a project's execution.
- TIFIA cash flow subordination, debt service grace periods, low interest costs, and extended repayment terms can enhance senior project debt.
- The flexible repayment provisions can be extended up to 35 years.
- The interest and principal repayments may be deferred up to 10 years.
- The financing is subordinate to the project's senior debt so it does not have to meet "senior debt" criteria. The senior debt of the project being financed must have an investment grade rating from one of the major bond rating agencies.

[77] See note 51, 28.
[78] See note 75, slide 14.

Figure 4- 5. TIFIA Projects (Federal Credit Assistance in Millions



TIFIA does not require a reserve fund nor does it require a multiple of coverage over the debt service.

Any government or private sector entity may be a project sponsor and submit TIFIA application. The U.S. DOT may not withhold other federal funds owed to a state if a TIFIA project defaults.

Like any other credit instrument, the TIFIA program naturally carries some risks and financing disadvantages.

TIFIA-provided credit instruments can only be applied to limited types of projects and the program involves a complex process of documentation.

The TIFIA program is not a grant and the total cost of a project increases due to the additional cost of interest payments.

Interest on TIFIA loans is taxable and the interest rates tend to be higher than on tax-exempt debt.

Project finance risks are not eliminated by TIFIA assistance.

TIFIA loan guarantees and lines of credit may delay, but will not prevent, a downgrade of senior project debt in cases where the project cash flows are inadequate.

The TIFIA program creates an opportunity for federal funds to be leveraged at a higher ratio in terms of the amount consumed for capital projects, but from the state's perspective, it does not provide an additional source of funding. It is a technique that allows the state to receive a part of the amount needed for realization of the project sooner than otherwise, but it must eventually be repaid from nonfederal sources.

4.5. Section 129 Loans

Section 129 loans allow states to use regular federal aid highway apportionments to fund loans to projects with dedicated revenue streams. Any federal aid highway project is a potential candidate for a Section 129 loan. States may make loans to public or private project sponsors. The project sponsor must pledge revenues from a dedicated source to repayment of the loan. Dedicated revenues may include, but are not limited to tolls, excise taxes, sales taxes, property taxes, motor vehicle taxes, and other beneficiary fees. Federal funds cannot be used as a revenue source. Loans can be in any amount, up to 80 percent of the project cost, provided that a state has sufficient obligation authority to fund the loan. Only those costs incurred after the date FHWA authorizes the loan may be funded by the loan.

The NHS Act requires that borrowers begin to repay Section 129 loans within five years after the project is opened to traffic or otherwise completed. The loan must be wholly repaid within 30 years from the date federal funds are authorized for the loan. States may subordinate the Section 129 loan to other debt.[79]

4.6. Innovative Uses of Tolling

Tolling is not a new concept. Tolls offer the opportunity to expand investment in the transportation system by introducing a new source of revenue. By financing through toll revenues, a road that would otherwise be built entirely with tax dollars could require less than 40% in tax dollars. Future maintenance on the road can be paid out of toll revenues. Finally, toll finance adheres to a "user pays" principle in which revenues are derived from the individuals who most directly benefit from the facility. Motorists should have a free alternative to toll roads, although the alternative will typically be more congested. Money raised through tolls should remain in the community of origin and not be used for projects in other parts of the state. The Arkansas Highway Commission currently has authority to levy and collect toll fees as well as a Regional Mobility Authority.[80]

SAFETEA-LU provides states with increased flexibility to use tolling, not only to manage congestion, but to finance infrastructure improvements as well. The following are programs available to states to toll on a pilot or demonstration basis:

Interstate System Construction Toll Pilot Program
Interstate System Reconstruction and Rehabilitation Toll Pilot Program
Value Pricing Pilot Program
Express Lanes Demonstration Program

4.6.1. Interstate System Construction Toll Pilot Program

Under the new Interstate System Construction Toll Pilot Program, the secretary may permit a state or group of states to collect tolls on an interstate highway, bridge, or tunnel for the purpose of constructing interstate highways. This program is limited to 3 projects in total (nationwide), and

[79] See note 51, 19, 20.
[80] House Committee on Transportation, Texas House of Representatives, "*Interim Report 2004: A Report to the House of Representatives*, prepared by Mike Krusee (Chairman) and Laurie McAnally (Committee Clerk), 97th Texas Legislature, November 17, 2004, 13.

prohibits a participating state from entering into an agreement with a private person which would prevent the state from improving adjacent public roads to accommodate diverted traffic.[81]

4.6.2. Interstate System Reconstruction and Rehabilitation Toll Pilot Program

The Interstate System Reconstruction and Rehabilitation Toll Pilot Program was established in TEA-21 to allow up to 3 interstate tolling projects for the purpose of reconstructing or rehabilitating interstate highway corridors that could not be adequately maintained or improved without the collection of tolls. This means that the candidate project must be for the conversion of a free interstate highway to a toll facility in conjunction with needed reconstruction or rehabilitation. An analysis is required to demonstrate that the facility could not be maintained or improved to meet current or future needs within the limits of the state's apportionments and allocations. No new federal funding is available for projects approved under this program. The tolled facility must be evaluated for a period of no less than 10 years. Once renovation to the facility is complete, tolls must be collected for at least 10 years.[82]

4.6.3. Value Pricing Pilot Program

Value pricing, also known as congestion pricing or peak-period pricing, is a way of harnessing the power of the market to reduce congestion and the economic and environmental costs that congestion imposes. Value pricing is not synonymous with tolling, for it can involve other kinds of charges - such as parking fees - that are similarly designed to influence drivers' behavior. Still, tolls continue to represent a pre-eminent tool in the value pricing arsenal. The key difference between a typical toll structure and a value pricing toll is variability. The key is for toll rates to vary with the level of congestion on the tolled roadway. Thus, rates naturally tend to be higher during rush hour. Road-use charges that vary with the level of congestion provide incentives to shift some trips to off-peak times, less congested routes, or alternative modes of transportation. Value pricing can also encourage drivers to combine some lower-valued trips with other trips or to eliminate them altogether. Some examples of value pricing possibilities include: single lane tolling, tolling multiple or single corridors, area-wide road pricing, and time-of-day parking pricing strategies (e.g., peak-period surcharges or cash payments to employees who forego subsidized parking).

As with the congestion pricing pilot program, funds are available to help cover costs associated with pre-implementation activities for up to three years prior to a given project's implementation. These activities might include, for example, project design and planning and public information and outreach. Funding under this program is also available to reimburse eligible implementation costs for up to three years from the time the project is implemented.[83]

The Value Pricing Pilot Program is funded with $59 million through 2009, to support the costs of implementing up to 15 variable pricing pilot programs nationwide to manage congestion and benefit air quality, energy use, and efficiency. As of October 10, there were 14 variable pricing

[81] U.S. Department of Transportation, Federal Highway Administration, "Fact Sheet on Highway Provisions: Tolling Programs," http://www.fhwa.dot.gov/safetealu/factsheets/tolling.htm (accessed May 19, 2006).
[82] See note 53, 6.
[83] See note 51, 33.

pilot programs under way and only one vacant slot left.[84] An additional $12 million has been set aside through 2009 to be used for projects not involving highway tolls. Activities eligible for federal aid reimbursement under this program include planning for, establishing, managing, operating, monitoring, evaluating, and reporting on value pricing projects. The standard federal share of costs for projects selected under this program is 80 percent, just as for most other federal aid highway programs.[85]

Examples of Value Pricing in Practice[86]

Several U.S. state and metropolitan areas are exploring the use of congestion pricing, including California, Oregon, Florida, Texas, and Washington D.C. Some states have implemented pilot projects to test the effect this may have on congestion. The following are examples of projects that are currently active.

Converting High-Occupancy (HOV) Lanes to High-Occupancy Toll (HOT) Lanes. On HOT lanes, Low-Occupancy Vehicles are charged a toll, while High-Occupancy Vehicles (HOVs) are allowed to use the lanes for free or at a discounted toll rate. HOT lanes create an additional category of eligibility for travelers wanting to use HOV lanes, since drivers can be eligible to use the facility either by meeting its minimum passenger requirement, or by choosing to pay a toll to gain access to the HOV lane. Operational projects are in:

- California: HOT Lanes on I-15 in San Diego, I-680 SMART Carpool Lanes in Alameda County, HOT Lanes on I- 880 in Alameda County
- Colorado: HOT Lanes on I-25/US 36 in Denver-Implementation
- Florida: HOT Lanes on I-95 in Miami-Dade County
- Georgia: HOT Lanes on I-75 in Atlanta, I-75 South HOT/Truck-Only Toll (TOT) Study in Atlanta
- Minnesota: HOT Lanes on I-394 in Minneapolis
- Texas: HOT Lanes on Two Radial Corridors in Houston (I-10 and US 290)

Cordon Tolls. Cordon tolls are fees paid by motorists to drive in a particular area, usually a city center. Some cordon tolls only apply during peak periods, such as weekdays. This can be done by simply requiring vehicles driven within the area to display a pass, or by tolling at each entrance to the area. Operational projects are in:

- California: Area Road Charging and Parking Pricing in San Francisco
- Florida: Cordon Pricing in Lee County

Fair Lanes. "FAIR" lanes stands for "Fast and Intertwined Regular" lanes. Multiple freeway lanes are separated, typically using plastic pylons and striping, into two sections: "fast" lanes and "regular" lanes. The fast lanes would be electronically tolled express lanes, where tolls could change dynamically to manage demand. In the remaining unpriced lanes, drivers whose vehicles were equipped with transponders would be compensated with credits that would be based on the tolls in effect at the time they traveled, and would be established at a percentage of the toll rate. Operational projects are in:

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[84] U.S. Department of Transportation, Federal Highway Administration, "Value Pricing Pilot Program," last modified October 10, 2006, http://www.ops.fhwa.dot.gov/tolling_pricing/value_pricing/index.htm (accessed November 13, 2006).

[85] See note 53, 6.

[86] U.S. Department of Transportation, Federal Highway Administration, "Value Pricing Pilot Program," last modified October 10, 2006, http://www.ops.fhwa.dot.gov/tolling_pricing/value_pricing/index.htm (accessed November 13, 2006).

- California: FAIR Lanes with Dynamic Ridesharing in Alameda County

Priced New Lanes. Priced new express lanes involve tolls on added lanes that vary by time-of-day and are collected at highway speeds using electronic toll collection technology. Tolls may be set "dynamically," i.e., they may be increased or decreased every few minutes to manage demand so as to ensure that the lanes are fully utilized, yet remain uncongested.

- California: Express Lanes on State Route 91 in Orange County, Extension of I-15 HOT Lanes in San Diego, Implementation of Dynamic Pricing on SR 91 in Orange County, Vehicle Enforcement System on I-15 Managed Lanes in San Diego, HOT Lanes in Median of State Route 1 in Santa Cruz County
- Colorado: Express Lane on C-470 in Denver
- Florida: Express Lanes on I-4 in Orlando, Priced Queue Jumps in Lee County
- North Carolina: HOT Lanes on I-40 in Raleigh/Piedmont
- Oregon: Express Toll Lanes on Highway 217 in Portland
- Texas: I-35 Value Priced Express Lanes in Waco, IH-10 Value Priced Express Lanes in San Antonio, Loop 1 HOT Lane Enforcement and Operations in Austin, Managed Lanes on the LBJ Freeway in Dallas, Managed Lanes on the Katy Freeway in Houston, Managed Lanes on I-30/Tom Landry in Dallas, Managed Lanes on I-35 in San Antonio
- Washington: HOT Lanes on SR 167 in the Puget Sound Region

Pricing on Toll Facilities. Pricing on toll facilities involve tolls on congested toll facilities that are varied by time of day with the intention of encouraging some travelers to use the roadway during less congested periods, to shift to another mode of transportation, or to change routes. With less people traveling during congested periods, the remaining peak period travelers will have decreased delays. To be eligible for the variable toll programs, vehicles must be equipped with transponders, which are read by overhead antennas. Operational projects are in:

- California: Peak Pricing on the San Joaquin Hills Toll Road in Orange County
- Florida: Bridge Pricing in Lee County, Extension of Value Pricing to the Sanibel Bridge and Causeway, Variable Tolls along the Sawgrass Expressway in Broward County, Variable Tolls for Heavy Vehicles In Lee County, Pricing Options on the Florida Turnpike in Miami-Dade County
- Illinois: Illinois Tollway Value Pricing Pilot Study
- New Jersey: Variable Tolls on the New Jersey Turnpike, Variable Tolls on Port Authority Interstate Vehicle Crossings, Express Bus/HOT Lane Study for the Lincoln Tunnel
- Ohio: Northern Ohio Freight Efficiency Study
- Pennsylvania: Variable Tolls on the Pennsylvania Turnpike

Usage-Based Vehicle Charges. Usage-based vehicle charges include mileage-based charges for insurance, taxes, or leasing fees; and car sharing; Pay-As-You-Drive (PAYD) Automotive Insurance is a usage-based charge that converts automotive insurance from a fixed to a per mile cost, providing a financial incentive to drive less. Operational projects are in:

- California: Car Sharing in the City of San Francisco
- Georgia: Simulation of Pricing on Atlanta's Interstate System
- Minnesota: Variabilization of Fixed Auto Costs
- Oregon: Mileage-Based Road User Fee Evaluation

- Washington: Global Positioning System (GPS) Based Pricing in the Puget Sound Region

"Cash-Out" Strategies. Parking Cash Out is a strategy that involves employers offering their employees the option of receiving taxable cash in lieu of free or subsidized parking provided by the employer. Employees may deny the cash and keep the tax-free parking subsidy or accept tax-free transit or vanpooling benefits in its place-with any balance in taxable cash. Car cash-out involves paying households to use one less car for a certain period of time. It helps people review their transportation choices and see how travel by foot, bicycle, transit, and ridesharing is competitive with the private automobile. The goal is to show people that they can save money and simplify their lives by not owning a second - or even first - car. Operational projects are in:

- Washington: Parking Cash-Out and Pricing in King County, Cash-Out of Cars in King County

Regional Pricing Initiatives. Road pricing strategies that include comprehensive area- or region-wide applications that evaluate pricing's effect on reducing congestion, altering travel behavior, and encouraging the use of other transportation modes. Region-wide pricing applications that use technologies that provide drivers with real-time congestion and pricing information on alternative routes are especially encouraged. Operational projects are in:

- Florida: Sharing of Technology on Pricing
- Georgia: GA-400 Variable Pricing Institutional Study in Atlanta

Truck Only Toll Lanes. Truck only toll (TOT) lanes are highway lanes that are reserved for the use of commercial vehicles, primarily trucks and buses. Commercial vehicles can pay a fee to use the lanes if so desired, or they can continue to use the regular lanes. Further, fees are only charged when necessary to manage the performance of the lanes. TOT lanes can either be newly constructed facilities, or they can be created by reallocating the use of existing lanes. Similar in concept to HOT lanes, the pricing strategy for TOT lanes corresponds to a cost per mile that will keep the TOT lanes performing at a level of service that provides more reliable travel. Operational projects are in:

- Georgia: Northwest Truck Tollway
- Texas: Truck Traffic Diversion Using Variable Tolls in Austin

4.6.4. Express Lanes Demonstration Program

The new Express Lanes Demonstration Program will allow a total of 15 demonstration projects through 2009 to permit tolling to manage high levels of congestion, reduce emissions in a nonattainment or maintenance area, or finance added interstate lanes for the purpose of reducing congestion. A state, public authority, or public or private entity designated by a state may apply. Eligible toll facilities include existing toll facilities, existing High Occupancy Vehicle (HOV) facilities, and newly created toll lanes. Tolls charged on HOV facilities under this program must use pricing that varies according to time of day or level of traffic; for non-HOV, variable pricing is optional. Automatic toll collection is required, and the Secretary must promulgate a final rule specifying requirements, standards, or performance specifications to ensure interoperability within 180 days.[87] Federal share of project cost of a facility tolled under this program, including installation of the toll collection facility, is not to exceed 80 percent.

[87] See note 53, 6.

4.6.5. Pass-Through Tolling

A pass-through toll, also known as a "shadow toll," is a payment by a state highway department of per-vehicles fees as reimbursement to public entities or private companies for road construction, operation, or both. The amount is based on a negotiated periodic payment from the state based on either traffic volume or vehicle miles traveled. The payments are not made until after project completion and completion of projects can often be expedited because the entity has the assurance that the highway department will repay them. The local area benefits from timely improvements in mobility and safety while the state benefits by not having to pay the substantial initial investment associated with road building and maintenance.[88]

The Florida DOT is offering annual "availability payments" to prospective concessionaires willing to build, own, and operate a new, nontolled tunnel to the Port of Miami. Payments will be made directly to the concessionaire by FDOT based on hours of lane availability and other factors such as safety and compliance with operating and maintenance standards.

4.6.6. Notes on Technology

The old method collection when a motorist had to stop at a toll booth to pay and wait for the arm to raise has changed dramatically. New technology allows motorists to purchase an electronic toll tag, which is affixed to their windshields. Scanners mounted above the toll road read the tag and deduct payment, or charge payment to a credit card while the car is traveling at a normal rate of speed. A camera snaps a picture of the license plates of those who do not have the tags, and they are mailed a notice of payment. Most who receive the notices pay promptly. One toll booth is typically available to those who are not regular commuters and don't have passes.

A human toll taker can handle 300 cars per hour. Dedicated electronic tolling lanes, with reduced speeds through the toll plaza, can process 1,000 cars per lane per hour. The most efficient of all, the transponder system where toll plazas are eliminated altogether, can process 2,200 cars per lane per hour.[89]

4.6.7. Tolling in Practice

According to the survey undertaken by the Government Accountability Office (GAO),[90] there are toll road facilities in 24 states throughout the U.S. and there are plans to build toll road facilities in 7 additional states. Figure 4-6 shows the states that have at least one existing toll road.

A total of 23 states have plans to build toll road facilities. Figure 4-7 summarizes the status of states' plans for highway tolling. Eleven of these states have received the required environmental clearances and have projects that are under design or in construction. The remaining 12 states do not have projects that have proceeded this far, but do have plans to build toll road facilities, according to their respective state transportation officials. Of these 23 states, 16 have existing toll

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[88] See note 72, 12.

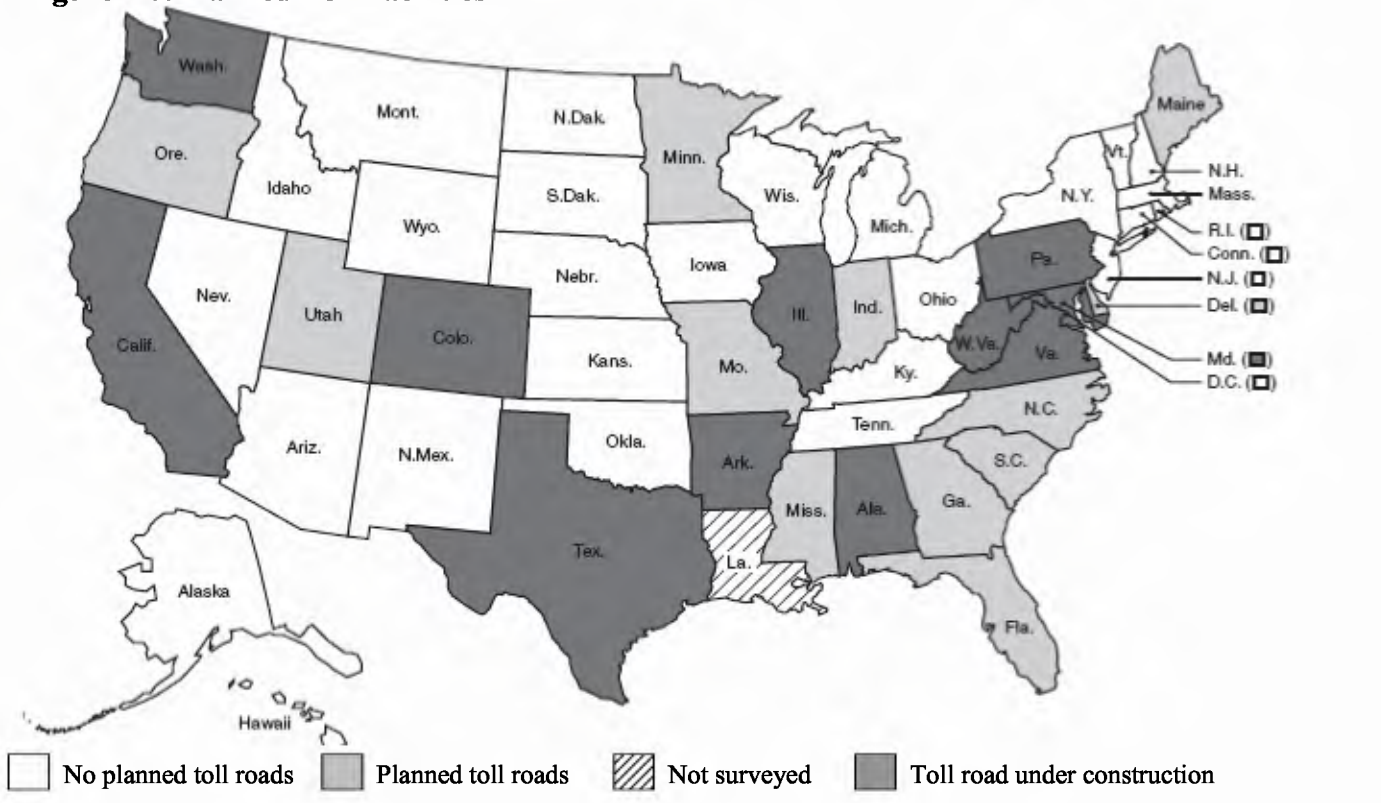
[89] Karen J. Hedlund, "Public-Private Partnerships: The Most Effective Finance Tool in the Box," Horizon, Fall 2006, 12.

[90] United States Government Accountability Office, "Report to Congressional Requesters: Highway Finance -- States' Expanding Use of Tolling Illustrates Diverse Challenges and Strategies," June 2006, http://www.gao.gov/new.items/d06554.pdf (accessed November 20, 2006), 20-29.

roads and are planning additional toll roads, and 7 are planning their first toll roads. The 7 states include Alabama, Arkansas, Mississippi, Missouri, North Carolina, Oregon, and Washington

Figure 4-6. Existing Toll Facilities

Figure 4-7. Planned Toll Facilities



The primary reasons for considering a tolling approach were to address funding shortfalls, to finance and build new capacity, and to manage congestion. In Georgia, for instance, tolling has become a strategy because there is a significant gap in transportation funding, and the motor fuel tax rate is the lowest in the country, 7.5 cents per gallon. In several states, transportation officials conducted financial assessments on specific highway projects and determined that, to complete the projects, tolling would be required as a source of revenue. For example, in Missouri, a funding analysis performed by the Missouri DOT found that the estimated construction costs for the Interstate 70 construction exceeded the available federal, state, and local funding sources, and the project cannot be advanced without tolling or other revenue increases. Missouri DOT estimates that the Interstate 70 reconstruction project will cost between $2.7 and $3.2 billion and that, with a current funding shortfall of $1 billion to $2 billion annually, tolling is being actively considered to close that gap. The commission views tolling as a tool that can help stretch limited state highway dollars further so that transportation needs can be met. Moreover, states are looking for whatever financial relief tolling can provide.

According to transportation officials, states are using or considering a tolling approach to finance new capacity that cannot otherwise be funded under current and projected transportation funding scenarios. Such new capacity may be in the form of new highways or new lanes on existing highways. For example, in Colorado, the state DOT is studying the investment of $3 billion in increased highway capacity, with 10 percent, or $300 million of the investment, coming from federal, state, and local governments and the remainder coming from tolls. With a $48 billion shortfall projected through 2030 and the percentage of congested lane-miles projected to increase by 161 percent, tolling is being considered. Projections by the state DOT in Colorado suggest that revenues are sufficient to allow for only spot improvements on a few transportation corridors over the next 25 years and, without tolling, none can undergo a major upgrade, and new capacity cannot be added. Growing freight traffic is also prompting some states to consider using tolls to pay for capacity enhancement. Examples include Interstate 81 in Virginia and Interstate 70 in Missouri.

Some states are using tolling to supplement their traditional motor fuel tax transportation funding through private-sector involvement and investment. Tolling is being used as a means to gain access to private equity and to shift the investment risk, in part, to the private sector. Currently, over 21 states have authorized the use of public-private agreements for the design, construction, financing and operation of transportation facilities. Many of the states have public-private partnership programs that were established to allow for toll concession agreements to finance highway projects. For example, Oregon and Texas are specifically looking to attract private investment as a new source of financing.

While growing congestion and traffic volumes have increased the demand for additional highway capacity, tolling is being considered as a tool to manage congestion. Value pricing pilot together with specific examples was discussed previously in section 4.6.3.

4.6.8. Pros and Cons of Tolling

Choosing to build a toll road allows for a project to be built immediately rather than waiting years for additional tax dollars. Bonds issued on the basis of projected toll revenues can accelerate the availability of funds required for the project's construction, thus expediting project implementation. Toll roads will bring revenues to help maintain existing highways and fund more

transportation projects within the local area without additional taxes. An additional advantage of toll financing is that tolls can be used as a pricing mechanism through which to influence user/driver behavior as a means of managing demand and congestion. Furthermore, toll increases are often times viewed more favorably by the public than increased taxes because toll roads are paid for by only the drivers who use the road and not by all taxpayers. In some cases, projects may use toll equity funding. A toll road can also be privatized, which would provide significant resources that may help alleviate government funding shortfalls. More advanced ETC technologies (electronic tolling) lead to increased efficiencies at a "toll booth."

On the other hand, there are also disadvantages associated with the use of toll financing. Tolls are frequently perceived as double taxation. This is because most users/drivers also pay motor fuel taxes at the same time they incur the user fee for traveling on a toll facility. Tolls are a politically sensitive issue and some believe that raising tolls will limit, not improve, mobility.[91] Another drawback is the extra costs of toll collections. Toll plazas require an initial investment in the collection infrastructure, which includes the construction of toll plazas and necessary technology put into place.

4.7. Public-Private Partnerships

Public-private partnership, PPP or P3, is an arrangement under which the private sector becomes involved in the financing, design, construction, ownership or operation of public facilities or services. Another term conveying the same meaning is privatization. The underlying concept is that both the public and private sectors can find mutual interest in cooperating to provide services and facilities. This "equity approach" when both parties share risks and profits of the project over a long period cannot be used for all projects, but can be applied for appropriate ones.[92]

The main privatization techniques are:

Asset sale
Contracting services
Construction and operation arrangements

4.7.1. Asset Sale

One privatization technique involves the sales of assets. In this case, the government sells the asset to a private buyer, who then operates the asset for public purpose.[93]

4.7.2. Contracting Services

The contracting out of services is another technique. The public sector contracts with a private firm to provide a specific service instead of producing the service itself. Ownership still resides with the public sector. Under this technique, the public officials set the policy goals and the private firm implements them. The goal of contracting for services is to achieve efficient service delivered for the price government is willing and able to pay. This technique is widespread and growing at the state and local levels of government.[94]

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[91] See note 72, 11.
[92] See note 49, 240, 261.
[93] See note 49, 264.
[94] See note 49, 264.

4.7.3. Construction and Operation Arrangements

In this privatization technique, a private firm or consortium may build or acquire a facility, such as a toll road, and then own and operate it to serve the general public. There are variations of this public-private structure based on the sharing of the responsibilities, risks, and rewards of each party. Under Build-Transfer-Operate model, a private firm may build and operate the asset for a limited time period, or transfer it to the public sponsor immediately after construction. Under Build-Operate-Transfer model, a private firm may receive a concession to build, finance, own, and operate an asset for an extended period, after which the asset is transferred to the public sponsor. The government may exit the project entirely and relinquish its operation to a private firm.[95]

Design-Build

Design-build is a method of project delivery in which one entity (design-builder) forges a single contract with the owner to provide for architectural/engineering design services and construction services. By contrast, a traditional design-bid-build approach means that the owner commissions an architect or engineer to prepare drawings and specifications under a design contract, and subsequently selects a construction contractor by competitive bidding (or negotiation) to build the facility under a construction contract. Benefits of design-build include a singular point of responsibility for quality, cost and schedule adherence, and time efficiency.[96]

Currently, 38 jurisdictions allow state DOTs to use design-build to some extent and that number is expected to grow. Independent research studies on project performance have shown that the Design-build method, when compared to traditional design-bid-build contracting, is 33 percent faster, 6 percent lower in cost, superior in product quality, and produces less than half the claims and litigation. These results do not include the advantage gained by the earlier use of the facilities, which often overshadows the savings cited above.

Some examples of successful design-build transportation projects include:

Interstate 15 highway project located in Utah was completed 4.5 years faster than planned.

Whittier Access Project-Tunnel Segment: a 2.6-mile tunnel through which both automobiles and locomotive traffic can travel through the mountain range that separates Whittier, Alaska from central Alaska. The tunnel was completed below budgeted cost and ahead of schedule.

The Conway Bypass: a 28.5 mile, $386 million Highway Project located in Myrtle Beach, South Carolina. It was built seven months ahead of schedule and below budgeted cost.[97]

Figure 4-8 shows the design-build state laws for transportation procurement. The design-build is permitted for all agencies for all types of design and constructions in the states that have dark green color on the map. Design-build is widely permitted in states with medium green color on the map, and design-build is a limited option in states in light green color in the figure below. Design-build is not specifically authorized in the red-colored states.

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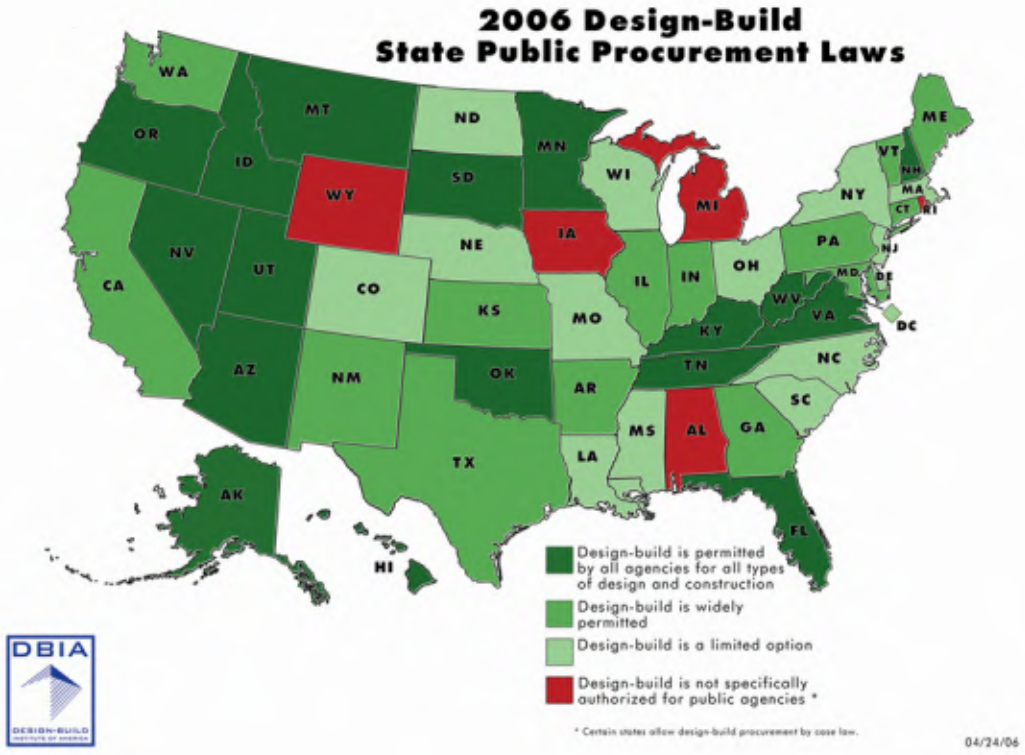
[95] See note 49, 265.

[96] See note 72, 16.

[97] Design-Build Institute of America, "Design-Build: A Proven Option for Effective Project Delivery," Horizon, Fall 2006, 26.

Figure 4-8: Design-Build State Public Procurement Laws[98]



Comprehensive Development Agreements (CDA)

A comprehensive development agreement is an agreement with a private entity that provides for the design and construction of a turnpike project. It can also provide for financing, acquisition of property, and the maintenance and operation of the facility.

The Federal Highway Administration has been successfully designing and building smaller road projects through CDAs or design-build since 1988. They are an accepted method of project delivery in roughly half the states in the U.S.[99]

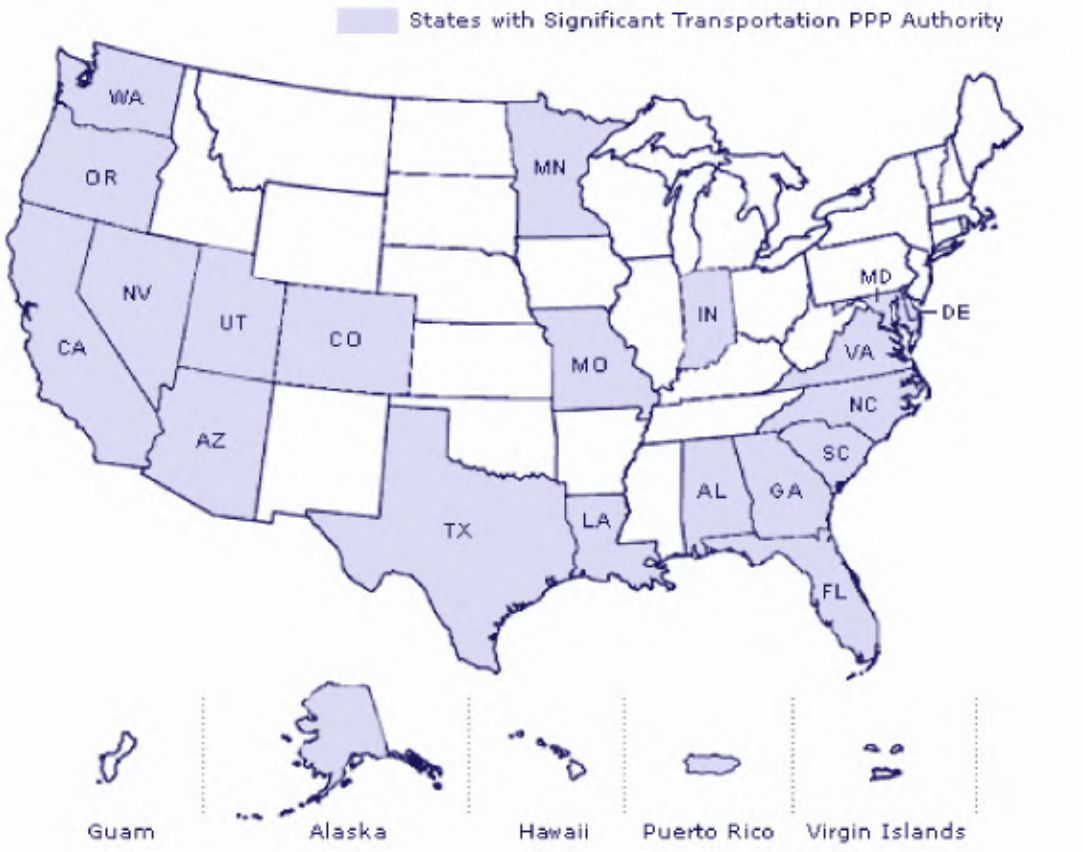
4.7.4. P3 in Practice

Today, over 21 states have authorized the use of public-private agreements for the design, construction, financing, and operation of transportation facilities. Two examples of toll road privatizations are the Chicago Skyway, which was sold for $1.835 billion, and the Indiana Toll Road, which provided the Indiana government with $3.85 billion when it was sold. Texas' P3 program may be the largest in the U.S. There are ten major projects under P3 contract, in procurement or negotiations, or in preparation for competitive procurements. Included among them are the Trans-Texas Corridor 35 (TTC-35) and Trans-Texas Corridor 69 (TTC-69), each of which is a multibillion dollar, long-term project to create new multimodal transportation and utility corridors across the state. Recent enactments include Indiana's new law authorizing a P3 approach to finance, build, and operate the I-69 extension from Indianapolis to Evansville. Utah has adopted legislation authorizing P3 tollway development agreements. In May, the Alaska Legislature passed

[98] Design-Build Institute of America, "Design-Build State Public Procurement Laws," map, http://www.dbia.org/ind_info/procurementmap.htm (accessed November 9, 2006).
[99] See note 72, 16.

a bill authorizing the use of a P3 to finance the Knik Arm Bridge near Anchorage. That same month, the California Legislature sent to the Governor a new statute permitting P3 development of 8 projects, including several directed to benefit goods movement. In addition, P3 bills have been introduced or proposed in several other jurisdictions, including New York, Ohio, New Jersey, and Missouri.[100] Figure 4-9 shows the states with significant transportation P3 authority.[101]

Figure 4-9: State Laws Authorizing P3s for Transportation Projects



The states that have utilized P3s include:[102]

Alabama – P3 Legislation in process; Alabama DOT and county commissions are allowed to establish toll roads, toll bridges, ferries, or causeways or allow for their operation by private parties. There is no express provision regarding the solicitation or acceptance of unsolicited proposals.

Alaska – New P3 Legislation (2006); Knik Arm Bridge near Anchorage.

Arizona – P3 Legislation in process; the state has two pilot programs, each allows up to two solicited and unsolicited proposals.

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[100] Karen J. Hedlund, "Public-Private Partnerships: The Most Effective Finance Tool in the Box," Horizon, Fall 2006, 4, 8.

[101] U.S. Department of Transportation, Federal Highway Administration., "Public Private Partnerships," http://www.fhwa.dot.gov/ppp/legislation.htm (accessed November 1, 2006).

[102] Gregory B. Carey (Managing Director, Goldman Sachs). *You Bet Your Assets: Leveraging Existing Infrastructure: Current Opportunities in the US PPP Marketplace.* (Austin, TX: Transportation Conference, June 9, 2006), slides, 6.

California – New P3 Legislation (2006); the department and regional transportation agencies are authorized to enter into lease agreements with public and private entities. The pilot program is limited to 2 projects in northern California and 2 in southern California until January 1, 2012. HOT lanes are authorized. Solicited and unsolicited proposals are permitted under the statute.
Colorado – Evaluation of P3 opportunities for future toll roads; current statue allows solicited and unsolicited proposals for P3s. The statue created a statewide tolling enterprise to finance, build, operate, and maintain toll highways. It is operated as a government-owned business within the Colorado DOT. The statue provides P3 authority to Colorado DOT for specific projects including turnpikes and HOT lanes.
Delaware – P3 Legislation in place; consideration of potential sale of State Route 1, Route 301 & I-95; The statue authorizes solicited and unsolicited proposals for P3 projects, including highways and bridges.
Florida – The statue allows Florida DOT to receive or solicit proposals for P3s. The Florida Turnpike Enterprise is operated like a private-sector business within the Florida DOT.
Georgia – The statue allows Georgia DOT to both receive and solicit proposals for P3s. It was amended in May of 2005. Potential competitors, for example, now have 135 days (instead of 90 days) to respond to an unsolicited proposal.
Illinois – Concession sale of Chicago Skyway for $1.83 Bn.
Indiana – Concession sale of the Indiana Toll Road with bid of $3.85 Bn; the statute establishes the process for entering into a public-private agreement on I-69 from Indianapolis to Evansville, and specifically prohibits the state from entering into such an agreement for any other road or project without further legislative approval.
Louisiana – Louisiana Act 304 authorizes "the Louisiana Transportation Authority to pursue public-private partnerships for the construction for certain transportation facilities." Authority may approve unsolicited and solicited proposals.
Maryland – P3 Legislation in place.
Minnesota – The statue authorizes solicited and unsolicited P3s for toll facilities. It authorizes HOT lanes.
Missouri – P3 Legislation in process; the Missouri Public-Private Partnership Transportation Act authorizes the Highways and Transportation Commission to form a P3 to use private sector innovation and investment to build a new Missouri River bridge in St. Louis, connecting to Illinois. The authority is limited to the bridge only. The statute does allow private partners to submit unsolicited proposals. The Commission is authorized to enter into interim and comprehensive agreements with a private partner. Transportation Corporation created as a vehicle for P3s. There is no express provision regarding the solicitation or acceptance of unsolicited proposals.
Nevada – The statue authorizes public bodies to accept unsolicited proposals to develop, construct, improve, maintain, or operate transportation facilities, so long as it serves a public purpose. Toll bridge and toll road projects, however, are prohibited under this statute.
New Jersey – P3 Legislation in process; there is consideration of potential concession sale of the NJ Turnpike and Garden State Parkway.
New York – P3 Legislation in process.

North Carolina – P3 Legislation in place; North Carolina Turnpike Authority authorized to develop, construct, operate, and maintain up to nine toll facilities, including a toll bridge. The statue allows solicited process only.
Ohio – P3 Legislation in process.
Oregon – Evaluation of private concessions on three separate Greenfield projects; the Oregon Innovative Partnerships Program with detailed guidelines was established. The statue allows Oregon DOT to solicit and accept unsolicited P3s for tollway projects.
South Carolina – P3 Legislation in place; South Carolina DOT allowed to enter into P3s and to construct and operate turnpike facilities. There is no express provision regarding the solicitation or acceptance of unsolicited proposals.
Texas – Trans-Texas Corridor Project; Six 50-year concessions for Greenfield projects; there is a consideration of private concession sale of Toll Road System in Harris County. The statue allows TxDOT, the Texas Turnpike Authority, and Regional Mobility Authorities to accept solicited and unsolicited proposals for P3s. Comprehensive Development Agreements are defined and require a popular vote for any conversion from free lanes to tolled. Toll franchises are limited to 50 years in most circumstances.
Utah – P3 Legislation in place (2006); the statue authorizes the Utah DOT, with approval from the Transportation Commission, to accept solicited and unsolicited proposals for P3s involving tollway facilities through use of "tollway development agreements."
Virginia – Dulles Toll Road concession; Capital Beltway HOT Lanes; Pocahantas Parkway concession; The statue allows solicited and unsolicited proposals. It contains detailed guidelines to assist VDOT and other public entities in implementing this program.
Washington – P3 Legislation in place (2005); under the new statute, the exclusive source of financing for Washington DOT projects is state treasurer-issued indebtedness; and no such indebtedness, or expenditures from it, may occur without prior legislative approval. Currently, only solicited proposals are allowed, but unsolicited proposals may be accepted after 6/30/07.

4.7.5. Pros and Cons of P3s

The project can benefit from the strengths of each party. The public sector, for instance, has the best resources for performing the up-front and high-risk work of project development, environmental assessment, community outreach, and condemnation. The private sector's contribution is efficiency due to private company's management, bottom-line focus, exploitation of new technologies and know-how, and economies of scale. Other benefits of involving private entities in a partnership project is a transfer of operating risks, ability to monetize future growth today, avoidance of raising taxes, and a broader capital base. Private entities have easier access to low-cost capital and markets for private debt and benefit from tax subsidies such as depreciation deductions and a deduction on interest payments on company's debt. Private companies are typically more experienced focusing on ROI, stable equity returns and building projects that make financial sense.

Among the disadvantages of P3s, there is fear of the unknown and loss of control. Private firms may use complex, opaque contracts which require a high level of expertise from the public sector. Bureaucracies not accustomed to handling complex financial investments may need to hire consultants at considerable cost to manage the arrangement. Transfer of operational control to a private entity and foreign control can be risky. Another concern that many DOTs have is that the

private entity will increase the toll/fee. A private firm may not have a primary focus on economic development and maximization of traffic flow and enhancement of user mobility. It does not consider the network effects of its road pricing. For example, its toll schedule may increase its profits while moving some traffic on to local roads which may change traffic and land use patterns and may cause future infrastructure problems.[103]

4.7.6. Elements of State Enabling Laws Relative to P3s

This section[104] summarizes the procedures states' transportation agencies follow in obtaining private partners and the criteria they use in evaluating proposals and negotiating agreements. Figure 4-10 illustrates this process on an example from Georgia.[105]

Authorizing statues generally allow for solicited and unsolicited proposals for P3 projects. Solicited proposals enable the responsible public entity to communicate its transportation project priorities. Unsolicited proposals, by contrast, enable the private sector to propose projects that the public entity might not otherwise have considered. Private entities seeking authorization to develop and/or operate a transportation facility must obtain an approval of the responsible public entity. Depending on local conditions of each state, the authority to enter into P3s may be restricted to the state DOT and state turnpike authority or be extended to regional or local entities as well. States authorize the responsible public entity to employ or contract with the outside experts (e.g. consulting engineers, attorneys or other experts) to assist with the preparation of implementation guidelines and evaluation of P3 proposals. Some states' laws contain general evaluation criteria for P3 proposals. These are based on the following factors: (a) Unique and innovative methods, approaches or concepts demonstrated by the proposal; (b) Scientific, technical or socioeconomic merits of the proposal; and (c) Potential contribution of the proposal to the responsible public entity's mission. The private sector and the public may have more confidence in the selection process if this process is detailed in advance.

Some states were questioning whether a prior legislative approval is required when an individual P3 proposal is received and whether a P3 proposal can be a subject to a local veto. Since private entities are less likely to be willing to incur significant development costs related to their proposal due to the added uncertainty of obtaining an approval, some statues require local and regional transportation entities to provide their input when the proposal is first issued or received. The states may select any procurement process that it believes is likely to be advantageous to the public, based on the probable scope, complexity or urgency of a project. More flexibility is an important goal, so authorizing a wider range of procurement tools is helpful because it enables the responsible public entity to more easily select the one that is most appropriate for a particular project. The relevant state law may authorize the public sector to grant long-term leases/franchises for the construction, operation and maintenance of toll facilities.

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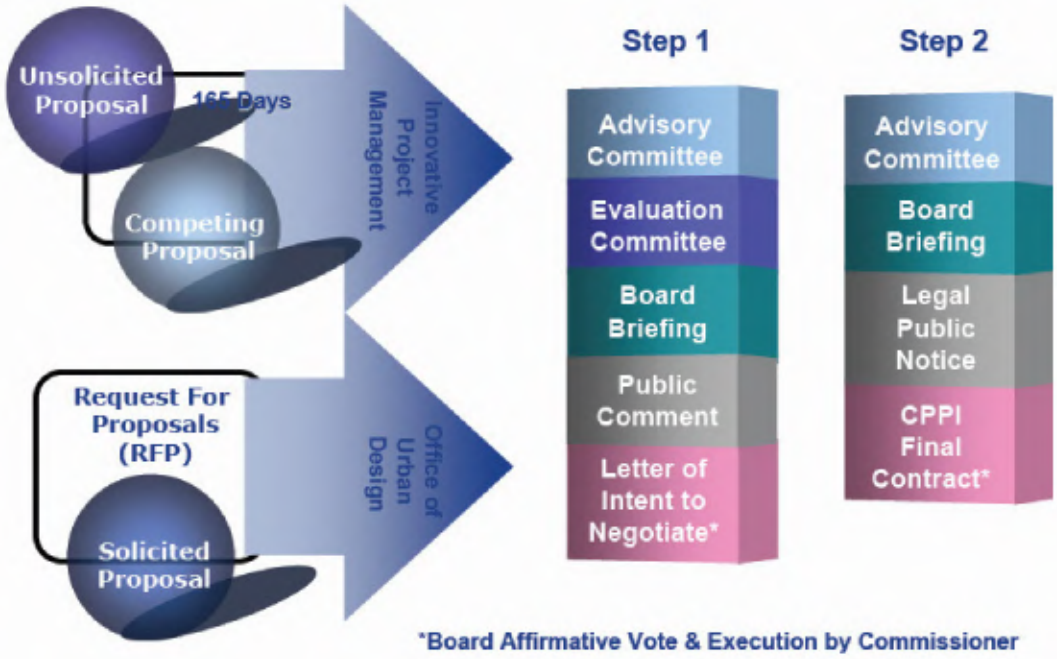
[103] See note 49, 240-245.

[104] Nossaman, "Overview of Key Elements and Sample Provisions State PPP Enabling Legislation for Highway Projects," October 2005, http://www.fhwa.dot.gov/ppp/legislation.htm (accessed October 19, 2006).

[105] Earl Mahfuz (Georgia Department of Transportation). *Georgia's PPP Initiative.* (TRB 2006 85th Annual Meeting, January 2006), slides, 11.

Figure 4-10. Public-Private Initiative Process in Georgia



When private entities submit a response to a request for proposals but are not awarded a contract, they may still receive a stipulated amount of the final contract price for any costs incurred in preparing that proposal. This payment encourages the private sector to devote the resources that are required to develop innovative proposals for P3 projects and their financing, and pays for the right to use any work product contained in the proposal, including the technologies, techniques, methods, processes, and information contained in the project design. When a firm from the private sector submits unsolicited proposal, the responsible public entity is authorized to asses a non-refundable Proposal Review Fee to offset a portion of the costs it incurs in reviewing this proposal. Upon acceptance of this unsolicited proposal, the public entity must publicly release a detailed description of the unsolicited proposal and provide a time frame (usually 90 days) within which other interested parties may submit proposals relating to the same subject, or such additional time as may be designated by the responsible public entity. Some P3 agreements may include a non-compete clause prohibition that provides a traffic guarantee to the private entity, provided that it will not unreasonably prohibit the development of essential public transportation systems and facilities. For example, the Chicago Skyway concession contains no restrictions on competing toll roads while the SR 125 project being developed in California does have such a provision. The private sector may also be worried about public disclosure of certain information about them and their business secrets. In order for confidential and proprietary information to be excluded from disclosure, the private entity must (i) invoke such exclusion upon submission of the data or other materials for which protection from disclosure is sought; (ii) identify the data or other materials for which protection is sought; and (iii) state the reasons why protection is necessary.

P3 projects may be financed in whole or in part with grants, loans, loan guarantees, lines of credit, revolving lines of credit or other financing arrangements available pursuant to the Transportation Infrastructure Finance and Innovation Act. The responsible public entity may apply for grants or

financial support and transfer or lend the proceeds of any such grant, or utilize such proceed available for credit enhancement, to public agencies or contracting parties. Some P3 statues contain a provision that the public sector has the authority to issue toll revenue bonds or notes to pay all or a portion of the cost of a qualifying transportation facility or to refund any previously issued bonds. Nonprofit corporations (referred to as "63-20 Corporations") preserve the ability for a project to be financed with tax-exempt bonds, while maintaining for both the public and private participants most of the benefits of private development.

The law permits the conversion of existing or partially constructed highways into toll roads upon necessary federal, state, and local approvals. Some state laws limit conversions to projects that add capacity. Detailing when and by how much tolls can be modified is a critical component of the P3 agreement. Each agreement may authorize the contracting party to impose tolls or user fees for use of the transportation system constructed and/or leased by it to allow a reasonable rate of return on investment. After expiration of the lease, the responsible public entity may continue to charge tolls or delegate such authority to continue to collect tolls or user fees for the use of the project to a third party, provided that such revenues must first be used for operations and maintenance of the project. Any revenues determined by the responsible public entity to be in excess must be paid by such third party to the State's Transportation Trust Fund, the responsible public entity or the State. A P3 agreement may have restrictions in its clause that prevents the revenues from P3 projects from being diverted away from uses that are not related to transportation.

4.7.7. Potential Transportation Investors

The major investors to date in the U.S. transportation market are Macquarie Infrastructure Group, Cintra, and Transurban. MIG and Cintra partnered on Chicago Skyway and Indiana Toll Road. MIG's other projects were: Dulles Greenway, South Bay Expressway in California, Foley Beach Express toll bridge and Oregon's South I-205 Corridor, Sunrise Project and Newberg-Dundee Project. Cintra currently undertakes Trans-Texas Corridor in partnership with Zachry firm. Transurban projects are Pocahontas Parkway, Capital Beltway (in partnership with Fluor), I-95/395 (in partnership with Fluor), SH 183, and SH 121.

The number of potential transportation investors is expanding rapidly. North American passive/financial investors include: AIG, CPP Investment Board, CDP Capital, CPTrust, CalPERS, Borealis, JP Morgan, Fortress, Goldman Sachs, Teacher's Pension Olan, The Carlyle Group, KVN, and BC Inc. Active/asset managers in North America are Zachry, Fluor, Bechtel, Aecom, and PKS Kiewit.[106]

4.8. Innovative Management of Federal Funds

Federal funds management techniques provide more flexibility in managing federal aid highway funds. The principal objective of these management techniques is to ease restrictions on the timing of obligations and reimbursements and create a broader range of options for meeting matching requirements. These grant management strategies are referred to as termed cash flow tools. Cash flow tools, such as partial conversion of advance construction, have offered the primary benefit of accelerating projects by permitting states to alter the timing and/or administration of federal funds

[106] JP Morgan, *Tolling: The Changing Landscape of Transportation Finance.* (Austin, TX: Transportation Conference, June 9, 2006), slides, 15, 16.

to better match project timetables. Investment tools such as flexible match and Section 129 loans have played the greatest role in attracting new sources of capital to transportation projects, although certain tools, such as toll credits, have proven at least as effective in helping states administer their programs as in increasing investment levels. At the same time, the benefits associated with investment and cash flow tools are not mutually exclusive, as powerful synergies have resulted in several instances where states have combined investment and cash flow tools on a single project.[107]

This section highlights the following financial techniques:

Advance Construction (AC)/Partial Conversion of Advance Construction (PCAC)
Tapered Match
Flexible Match
Toll Credits
Section 129 Loans

4.8.1. Advance Construction / Partial Conversion of Advance Construction

Advance-constructed projects differ from conventionally funded federal aid projects in that that a state obligates federal funds for an advance-constructed project after the project is started, rather than before. This technique allows a state to initiate a project using nonfederal funds, while preserving its eligibility for future federal aid funds, and gives it the ability to move a project forward. The FHWA can approve an advance construction project at any time provided the project is on the State's Transportation Improvement Program (STIP).

Partial conversion of advance construction enables states to convert an advance-constructed project to a federal aid project in stages, such that the amounts obligated approximate the amounts actually expended. This is particularly useful when variable revenue streams are dedicated to the cost of a project. A state can thus match its cash flow needs and secure project benefits.[108]

4.8.2. Tapered Match

Under the tapered match approach, the nonfederal matching ratio is imposed on projects rather than individual payments. Thus, federal reimbursement of state expenditures can be as high as 100 percent in the early phases of a project provided that by the time the project is complete, the overall federal contribution does not exceed the statutory federal aid limit for the project in question.[109]

4.8.3. Flexible Match

The Federal Aid Highway Program has traditionally required that recipients of federal assistance themselves contribute toward the total cost of any given project. Flexible match allows certain public donations of cash, materials, and services to satisfy the nonfederal matching requirement. This increases a state's ability to fund its transportation programs by accelerating certain projects that receive donated resources and allowing states to reallocate funds that otherwise would have

[107] See note 51, 4-7.
[108] See note 51, 5.
[109] See note 51, 7.

been used to meet federal aid matching requirements. Flexible match can increase a state's incentive to seek private partners.[110]

4.8.4. Toll Credits

A state is permitted to use certain toll revenue expenditures as a credit toward the nonfederal matching share of all programs authorized by ISTEA and Title 23. The federal obligation is allowed to be increased up to 100 percent of a project's cost to the extent that credits are available. The credit the state can earn for any federal fiscal year is determined by the amount of toll revenue used by toll authorities for capital expenditures to build or improve public highway facilities that serve interstate travel. To qualify for the credit, the state's total nonfederal highway and transit transportation capital expenditures must equal or exceed the average of prior years, so called Maintenance of Effort (MOE) calculation. The MOE test is required at the time the credit amount is established. Once a credit amount is appropriately established, this credit will remain available until used by the state. Similar to toll credits, state and local funds expended on off-system bridges may be credited to the nonfederal share of federal aid bridge projects.[111]

[110] See note 51, 9.
[111] See note 51, 12.

4.9. Summary

4.9.1. Innovative Finance Techniques

Technique	Description
GARVEE	GARVEEs permit states to pay debt service and other bond-related expenses with future federal aid highway apportionments.
State Infrastructure Banks (SIB)	Allows certain states to use regular federal aid highway apportionments to capitalize state-administered revolving funds known as State Infrastructure Banks (SIBs). SIBs can offer loans and credit enhancement to both public and private transportation project sponsors. Banks can also be capitalized with state funds.
TIFIA	Allows U.S. DOT to provide direct credit assistance to sponsors of major transportation projects. Credit assistance can take the form of loans, loan guarantees, or lines of credit. The total amount of credit cannot exceed 33 percent of eligible project costs.
Section 129 Loans	Allows states to use regular federal aid highway apportionments to fund direct loans to projects with dedicated revenue streams.
Tolling Federal Aid Highways	Provides states the discretion to levy tolls on most non-interstate federal aid highways.
Interstate System Construction Toll Program	Collects tolls on an interstate highway, bridge, or tunnel for the purpose of constructing interstate highways
Interstate Reconstruction and Rehabilitation Pilot Program	Allows up to three pilot projects to convert reconstructed or rehabilitated free interstate highway segments into tollways.
Value Pricing Pilot Program	Sponsors the testing and evaluation of road and parking pricing concepts designed to achieve reductions in highway congestion.
Express Lane Demonstration Program	Manages high levels of congestion, reduce emissions in a nonattainment or maintenance area, or finance added interstate lanes for the purpose of reducing congestion.
Pass-Through Tolling	Is a payment by a state highways department of per-vehicles fees as reimbursement to public entities or private companies for road construction, operation, or both.
Privatization – Asset Sales	The government sells the asset to a private buyer, who then operates the asset for a public purpose.
Privatization – Contracting Services	The public sector contracts with a private firm to provide a specific service instead of producing the service itself.

Privatization – Construction and Operation Arrangements	A private firm or consortium may build or acquire a facility, such as a toll road, and then own and operate it to serve the general public.
Advance Construction (AC) and Partial Conversion of Advance Construction (PCAC)	AC allows a state to begin a project even if the state does not currently have sufficient federal aid obligation authority to cover the federal share of project costs. Under PCAC, a state may elect to obligate funds for an advance-constructed project in stages.
Tapered Match	With tapered match, the nonfederal matching requirement applies to the aggregate cost of a project rather than on a payment-by-payment basis.
Flexible Match	Flexible match allows states to substitute private and other donations of funds, materials, land, and services for the nonfederal share of funding for highway projects.
Toll Credits	States may use revenue from toll facilities as a credit toward the nonfederal matching share of certain highway projects.

4.9.2. Summary Comparison of SIBs, Loan 129, and TIFIA Loans

	SIBs	Section 129	TIFIA
Source of Funding	Seed money, state match, state's apportionments	State's apportionments + match	Direct federal (does not affect state budget)
Loan Decisions	State DOT/SIB board if established	State DOT	TIFIA JPO & Credit Council (USDOT)
Loan Terms	Set by state/SIB; max 35 years	Set by state; max 35 years	Negotiated by TIFIA JPO/max 35 years
Source of Repayment	Federal funds or state funds	Dedicated non-federal revenue	Dedicated nonfederal revenue
Project Size or Loan Size	Depends on size of SIB; loan can be anywhere from $1 million to $100 million	Depends on DOT decision; usually loan under $100 million	Minimum $50 million project size; max total loans approx. $2.5 billion annually

Chapter 5

Closing the Funding Gap

Given current expectations for AHTD's revenues over the next 10 years, the Highway department will face a funding shortfall of $15.12 billion unless new sources of revenue are identified and implemented. As discussed in Chapter 2, the AHTD cannot close the gap with existing revenue sources unless it increases taxes and fees that are currently being collected[112] and/or utilizes innovative financing methods that were described in Chapter 4.

5.1. Traditional Revenue Sources

Motor fuel taxes (75%) and registration fees (20%) represent the largest portions of Arkansas' transportation revenue sources in Arkansas. The rest of state revenue (5%) are miscellaneous revenues, such as interest on SHD Fund, title transfer fees, driver search fees, operator's license fees, special permit fees and other income.

Policy makers are not restricted to changing taxes or fees from one source in order to generate sufficient revenue to close the gap. It would be more equitable to distribute tax or fee increases across several revenue sources. Moreover, the increase needed not be equal across categories. Taxes and fees can be increased in any increment preferred by policymakers.

5.1.1. Motor Fuels Revenue

Table 5-1 summarizes the incremental revenue to be gained by raising fuel taxes by one cent. Estimates are based on the amount of fuel consumption in Arkansas in FY 2005 as reported by the AHTD.[113]

Table 5-1. One Cent Fuel Tax Increase (dollars)

	Total Annual Amount	Amount to AHTD	Amount to Cities	Amount to Counties
Gasoline	13,931,036	9,751,725	2,089,655	2,089,655
Diesel	5,852,099	4,096,469	877,815	877,815
LPG	7,054	4,938	1,058	1,058
CNG	95	66	14	14
Total	**19,790,284**	**13,853,198**	**2,968,543**	**2,968,543**

[112] There are several risk elements that may influence these calculations. Gasoline tax, fuel tax, and registration fee revenues may differ from the forecast. These revenues are related to employment, population, and income growth, and changes in these categories will influence revenues. The amount of gasoline tax revenue could also be negatively influenced by an increased usage of hybrid vehicles. Currently, hybrid vehicles are attaining a market presence and automobile manufactures are developing models across categories including SUVs that will lead to fuel displacement and decreases in gasoline tax revenues. Furthermore, inflation may exacerbate the funding shortfall since gasoline tax is based on gallons -- not price -- and the cost of building materials and labor rises with inflation. Current federal aid participation guaranteed by SAFETEA-LU Act until its revision in 2009 when the guaranteed level of funding may change.

[113] Knighten Starnes (Arkansas State Highway and Transportation Department), e-mail to the author, June 13, 2006.

The appeal of this approach is that the tax is closely associated with transportation and adheres to the principle "user pays." The tax is easily administered and generates relatively stable revenue.

On the other hand, the gas and diesel taxes in Arkansas are already the highest among the surrounding states. High gas and diesel prices are currently a burden for people in lower income brackets and, therefore, increasing these taxes would not be politically favorable. An increase of the diesel tax would likely be strongly opposed by the American Trucking Association.

Variable Motor Fuel Tax

Inflation, improved vehicle efficiency and rising construction costs have weakened the purchasing power of federal gas tax revenues despite their increased rates. The nominal rate increased 4.56 times between 1970 and 2000. It was worth just over 3.1 cents per gallon in real term since 2000. The gas tax has not been increased by more than .1 cent since 1993.[114] Adopting a variable motor fuel tax will help to maintain the purchasing power of the motor fuel tax.

Appendix D presents a table that shows 17 states that have employed a variable rate fuel tax structure since 1970. Currently, there are seven states with variable rate motor fuel taxes. These various forms can be categorized as:

Variable tax rates that are adjusted based on changes in the gas price
Variable tax rates that are tied to a cost index or inflationary measures such as the Consumer Price Index (CPI) or the FHWA's maintenance and construction cost indexes
Variable tax rates that are adjusted based on sales of motor fuel
Variable tax rates that are specified or adjusted to meet state transportation revenue needs[115]

Indexing taxes to price indices such as the Consumer Price Index (CPI) or the Construction Cost Index (CCI) will keep the purchasing power of gas tax revenues the same as inflation rises. This has proved to be the most effective method for most of the state with variable motor fuel tax. Assuming the indices grow at between two percent and four percent per year, index calculations would tend to add about .43 to .87 cents per year. Thus, rounding down to the nearest whole cent, the tax rate would probably be revised by one cent every two years. A one cent increase would generate extra $13.9 million.

Indexing to the CPI increases the tax as general consumer prices increase and thus maintains the purchasing power of the Highway Department. However, recent increases in the price of gasoline make this option politically less feasible. Another disadvantage of indexing is that it does not deal with the issue of future declines in gasoline consumption due to increased fuel efficiency and more alternative fuel and hybrid vehicles on the market.

5.1.2. Motor Vehicle Registration Fees

The policymakers can increase passenger vehicle registration fees and/or increase commercial truck registration fees. As was presented in Chapter 3, Arkansas' registration fees are among the

[114] JP Morgan, *Tolling: The Changing Landscape of Transportation Finance* (Austin, TX: Texas Transportation Conference, June 8, 2006), slides.

[115] Kentucky Transportation Center, College of Engineering. *Enhancing Kentucky's Transportation Funding Capacity: A Review of Six Innovative Financing Option,* June 2005, 9-12.

lowest in both passenger vehicles and truck categories. Arkansas' fee for a typical passenger vehicle is $17 per year compared to the other states' average of $38 or a medium of $24.3. Table 5-2 shows how much incremental revenue can be generated by increasing the passenger vehicles and pickups fees by $5, $10, $15, or $20. The Table also shows incremental revenue generated by truck registration fees if the fees were to increase by $100, $150, or $200. These options create potential incremental revenue for the AHTD in range of $13.1 to $41.0 million[116] per year.

Table 5-2. Registration Fee Increase (dollars)

Increase Registration Fee on:	Total Annual Amount	Amount to AHTD	Amount to Cities	Amount to Counties
Passenger Vehicles & Pickups by $5	10,631,763	7,442,234	1,594,764	1,594,764
by $10	21,263,525	14,884,468	3,189,529	3,189,529
by $15	31,895,288	22,326,701	4,784,293	4,784,293
by $20	42,527,050	29,768,935	6,379,058	6,379,058
Trucks by $100	7,910,932	5,537,652	1,186,640	1,186,640
by $150	11,866,398	8,306,479	1,779,960	1,779,960
by $200	15,821,864	11,075,305	2,373,280	2,373,280
Motorcycles by $5	258,418	180,892	38,763	38,763

Vehicle registration fees are based on the weight of the vehicle, therefore heavier vehicles cost more.[117] The collection of fess is simple to implement and enforce since infrastructure and personnel already exist to collect the tax. The fee is directly related to transportation and hence it would support the "user pays" principle. An increase in passenger vehicle registration fees for heavy vehicles and /or an increase in commercial truck registration fees would also support the "polluter pays" criterion since the fees would be collected from the vehicles inflicting the most environmental damage. An increase will both raise the revenues while bringing the state's tax structure more in line with the neighboring states.

However, the revenue collected is small compared with the overall needs. The passenger vehicle registration fee revenue will likely decrease as fuel costs rise and sales of heavier, less fuel efficient vehicles decline. Opposition from the American Trucking Association can be expected. Another drawback is that the tax is not responsive to inflation, which may erode the value of the tax over time.

5.1.3 Sales Tax

In Arkansas, the existing sales and use tax is 6% which generates more than $2.4 billion in annual revenues.[118] There are three options how the AHTD can raise higher revenues from the sales tax. First, the sales tax exemption on motor fuel can be removed and revenues gained from this tax can

[116] Calculations based on data provided by Donna Beaver from the Department of Finance & Administration, *2005 Motor Vehicle Registration by County*, e-mail to the author, August 3, 2006.
[117] Department of Finance & Administration, "Motor Vehicle Registration Fee Schedule," http://www.arkansas.gov/dfa/motor_vehicle/doc_rtf/schedule_fee1.doc (accessed August 3, 2006).
[118] Estimate based on the following source: Department of Finance & Administration, "State Sales Tax (Excise) Collections," 01/01/2006 – 03/31/2006, http://www.arkansas.gov/dfa/excise_tax_v2/st_index.html (accessed July 1, 2006). Department of Finance & Administration, "State Use Tax Collections," 01/01/2006 – 03/31/2006, http://www.arkansas.gov/dfa/excise_tax_v2/st_index.html (accessed July 1, 2006).

be dedicated to transportation. Imposing sales tax on gas and diesel fuel would add approximately $254.8 million to annual revenue.[119]

Sales tax revenue advantage is the ease of its collection because the tax can be charged to the user at the pump. Since sales prices are tied to inflation, gasoline prices will increase with inflation and thus the revenue base will expand to capture the inflationary changes. However, as a result of inflation, the sale tax and revenue collected will fluctuate and the revenue base will be less stable.

Table 5-3. Sales Tax on Motor Fuel (dollars)

	Total Annual Amount	Amount to AHTD	Amount to Cities	Amount to Counties
Gasoline	255,928,930	179,150,251	38,389,340	38,389,340
Diesel	108,016,472	75,611,530	16,202,471	16,202,471
Total	363,945,402	254,761,781	54,591,810	54,591,810

A second option is to transfer a sales tax on new vehicles, used vehicle, auto repair parts and service, and retail tire sales. Revenue estimates generated by this option appear in Table 5-4. This table summarizes revenues that could be generated by adding a 2 or 4 percent tax on the above mentioned items and services. The resulting revenue for the AHTD would be between $100,000 and $600,000.[120]

Table 5-4. Sales Tax on New Vehicles, Used Vehicle, Auto Repair Parts and Service, and Retail Tire Sales (thousands of dollars)

	Total Annual Amount	Amount to AHTD	Amount to Cities	Amount to Counties
New Car Dealers -- additional sales tax of 2%	115,499	80,849	17,325	17,325
of 4%	230,998	161,699	34,650	34,650
Used Car Dealers -- additional sales tax of 2%	16,849	11,794	2,527	2,527
of 4%	33,697	23,588	5,055	5,055
Automotive Parts & Accessories -- additional sales tax of 2%	6,314	4,420	947	947
of 4%	12,627	8,839	1,894	1,894
Automotive Repair and Maintenance -- additional sales tax of 2%	7,511	5,258	1,127	1,127
of 4%	15,022	10,516	2,253	2,253

[119] Estimate based on the source from footnote 84, and American Automobile Association, "Daily Fuel Gauge Report," http://www.fuelgaugereport.com/ARavg.asp.(accessed August 24, 2006).
[120] Estimate based on U.S. Census Bureau, "2002 Economic Census. Arkansas: 2002. Retail Trade, and Other Services. Geographic Area Series," August 2005, http://www.census.gov/econ/census02/guide/02EC_AR.HTM (accessed August 10, 2006).

Tire Dealers -- additional sales tax of 2%	4,971	3,480	746	746
of 4%	9,943	6,960	1,491	1,491
Additional $2 per Tire	497,129	347,991	74,569	74,569
Total for 2% Tax Increase Option	151,144	105,801	22,672	22,672
Total for 4% Tax Increase Option	302,287	211,601	45,343	45,343

Thirdly, legislators have the option of raising the sales and use tax by 1% and dedicating this marginal revenue to transportation. Dedicated sales taxes are commonly used to support transportation around the country. Some places earmark the funds for specific transportation projects while others let local governments adopt sales taxes more generally "for transportation purposes." A targeted increase to the sales tax is also possible at the county level for county-specific projects. This is often referred to as a 'local option' tax, and is also common throughout the country.[121] A forecast of the marginal revenue generated by a sales tax increase of between 0.5 % and 1.5% is presented in the Table 5-5 together with the revenues it would generate.[122]

Table 5-5. Marginal Revenue from Sales and Use Tax Increase (dollars)

	Total Annual Amount	Amount to AHTD	Amount to Cities	Amount to Counties
0.5% Increase	199,916,919	135,743,588	29,087,912	29,087,912
1.0% Increase	399,833,839	271,487,176	58,175,824	58,175,824
1.5% Increase	599,750,758	407,230,765	87,263,735	87,263,735

An increase in the state sales and use tax has a high revenue potential for a low tax rate. Residents and visitors would pay the tax continually throughout the year, not all at once. Sales taxes are difficult to evade and are generally considered to be fair.

However, there is no clear link between the sales and use tax and transportation. Two thirds of sales tax in Arkansas is traditionally allocated to educational purposes. Sales tax revenues are also unreliable and decline during economic downturns. This tax may also place undue burdens on lower income households.

5.1.4. Income Tax

Corporate Income Tax Increase

Corporate income tax is paid by all businesses in Arkansas including financial institutions. The tax range is 1.0 to 6.5 % for tax brackets $3,000 to $100,000. For net income $25,000 through $100,000, the tax is $940 plus 6% of the excess over $25,000. For net income over $100,000, the tax is $5,440 plus 6.5% of the excess over $100,000.[123] In 2005, the state of Arkansas collected

[121] Regional Plan Association, "Reform Revenue Results. How to Save New Jersey's Transportation System," November 2005, 8, http://www.census.gov/econ/census02/guide/02EC_AR.HTM (accessed August 10, 2006).
[122] See note 88.
[123]Department of Finance & Administration, "Arkansas 2005 Corporate Income Tax Booklet" http://www.arkansas.gov/dfa/income_tax/documents/C_Corp_Instr_2005.pdf (accessed August 17, 2006). Arkansas.

$277.3 million from these taxes. If the corporation income tax were to increase by 1%, it would generate marginal revenue of $2.77 million.[124] This figure is presented in Table 5-6.

Increasing the corporation business tax would provide relatively high revenues for a low marginal tax rate (in other words, a fraction of one percent raises considerable revenue). The tax is very difficult to evade.

The tax stability is compromised, however, by its sensitivity to economic downturns. There is a link between the tax and transportation in that it is paid by corporate beneficiaries of the system, but the link is not as direct as in other revenue options.

Individual Income Tax Increase
Individual income tax is paid by resident and nonresident individuals, estates, and trusts deriving income from within Arkansas. The tax range is 1.0 to 7 % for tax brackets $3,399 to $25,000 and over.[125] Increasing the income tax by 1% would generate marginal revenue of $18.75 million.[126] This figure is presented in Table 5-6.

The advantages associated with this option are relatively high revenues for a low marginal tax rate and a difficulty to evade the tax. The disadvantages are no direct link to transportation and disproportionate affect on low income households.

Table 5-6. Marginal Revenue from Corporate and Individual Income Tax Increase (dollars)

	Marginal Revenue	Amount to AHTD	Amount to Cities	Amount to Counties
Individual Income	18,750,650	12,731,691	2,728,220	2,728,220
Corporation Net Income	2,773,110	1,882,942	403,488	403,488
Total	21,523,760	14,614,633	3,131,707	3,131,707

5.1.5. Rental Car Fees

Currently, the rental vehicle tax is 10%. Seventy-five percent (75%) of the net revenues derived from this tax is deposited into the Arkansas Public Transit Trust Fund. The remaining twenty-five percent (25%) is deposited in the Department of Education Public School Fund Account for teacher salaries.[127] Thus, the net available amount for the AHTD's disbursements was $3.38 million in FY 2006.[128]

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[124] Estimate based on U.S. Census Bureau, "State Government Collections: 2005," July 1, 2005, http://www.census.gov/govs/statetax/0504arstax.html (accessed August 25, 2006).
[125] Department of Economic Development, "2005 Arkansas Economic Report," February 2006, pages 9-10, http://www.1800arkansas.com/reports_publications/files/2005%20Economic%20Report.doc (accessed August 17, 2006).
[126] See note 94.
[127] Arkansas State Highway and Transportation Department, "§26-52-311. Rental Vehicle Tax." http://arkansashighways.com/Info/Act300/2005/26/26-52-311.htm (accessed August 29, 2006).
[128] Knighten Starnes, Arkansas State Highway and Transportation Department, e-mail to the author, September 9, 2006.

There are several options for raising additional revenues from rental car fees: increase the fees paid by car renters in Arkansas on cars sold to rental car companies or increase the fee on renters. An example would be to raise the rental car tax from 10% to 15%. This would generate approximately $169,000 in additional revenue for the state.

One can also make the claim that revenue raised from rental car taxes should not be diverted away from transportation, and therefore the AHTD should receive the full 100 percent of the rental car tax revenue collected. In this case, AHTD would gain an additional $1.2 million for its discretion.

The clear advantage is that the fee is directly linked to transportation and the burden of paying this tax is exported to tourists and business travelers who are the predominate users of rental cars.

However, the tax would affect Arkansas residents who must rent a vehicle to replace a wrecked vehicle. The amount collected from these taxes would be small compare to the total shortfall.

5.2. Alternative Financing

This section of Chapter 5 discusses alternative financing techniques that can be applied in closing the funding gap. Alternative financing is meant to supplement, not to replace traditional financing methods and is used to achieve a set of nonmutually exclusive objectives for project implementation. Some of these techniques are considered "innovative financing" tools and were discussed in detail in Chapter 4. Their primary objective is to:

Maximize the ability of states and other project sponsors to leverage federal capital for needed investment in the nation's transportation system.

More effectively utilize existing funds.

Move projects into construction more quickly than under traditional financing mechanisms, and

Make possible major transportation investments that might not otherwise receive financing.

The AHTD needs to consider innovative financing in addition to a tax or fee increase in order to accelerate the availability of funds and to generate transportation and economic benefits for Arkansas residents in the near term. There are three innovative financing techniques that deserve primary consideration. They are: a SIB, Tolling and Privatization. Several other alternative financing techniques are also described.

5.2.1. SIB

As was discussed in Chapter 4, SIB provides the state with control of capital sources, flexibility in project selection and flexibility in financial management. SIB works like revolving credit (it lends money and uses repayments to fund future loans) and provides credit enhancement products. These features are attractive to nonfederal investors including P3s.

5.2.3. Tolling

Tolling is not a new concept. However, it is not currently being implemented in Arkansas. According to the Wilbur Smith Associates' study from 2002, there are two highways where tolling would be feasible. See Appendix B for simulations and scenario analysis of toll roads in Arkansas.

5.2.4. Privatization

The primary advantages of involving the private sector in a project is the transfer of operating risks, the ability to monetize future growth today, the avoidance of raising taxes and creating a broader capital base. A private firm can be involved in a variety of ways: financing, design, construction, ownership, or operation of public facilities and services. Attracting private investors would also decrease some infrastructure improvement costs.

5.2.5. Mileage-Based Road User Fees[129]

New information technologies, such as onboard computers, global positioning systems (GPS), digital maps, and wireless communications allow for measuring and recording vehicle travel. These technologies allow travel to be recorded by road segment, time of day, and different states and jurisdictions. Advanced electronic tolling applications that incorporate a variety of pricing schemes (e.g. congestions tolls, weight- and distance-based user fees and insurance charges) are in development around the world. Among these, the mileage-based road user fee has the greatest revenue potential.

Mileage-based road user fee is a per-mile charge based on Vehicle Miles Traveled (VMT) within a state and can be applied as a substitute for gas tax. This method of electronic toll would require vehicles to be equipped with GPS receivers, a set of digital maps showing jurisdictional boundaries, an odometer feed, a rate table for computing distance charges, and a form of wireless communication for reporting. An onboard computer would record and sort out miles traveled by jurisdiction and keep a running total of fees owed to different authorities. VMT can be collected electronically through GPS satellite or electronically at a gas station via short range radio frequency, in which case the fees could be added to the fuel bill.

This method adheres to the "user pay" principle and allows for rush hour pricing. However, there are some issues with mileage-based road user fees. These issues concern: privacy, environmental issues, retrofitting cost versus long phase-in, setting mileage fee rate, interstate system standardization and revenue allocation, and integration with federal solution. Privacy and environmental issues, the two most common public concerns, are being addressed and resolved.

The Minnesota Department of Transportation pooled resources with 14 other states (California, Connecticut, Iowa, Kansas, Michigan, Missouri, North Carolina, Ohio, Oregon, South Carolina, Texas, Utah, Washington, and Wisconsin) and the Federal Highway Administration to fund a proposal for a multijurisdictional (state-to-state) mileage fee. Switching to mileage-based road user fee system would not only require investment in new technology, but also developing new administrative capabilities within government or a private administrator of the program.

5.2.6. Regional Mobility Authority

Regional Mobility Authority (RMA) is formed by one or more counties to manage and finance local transportation projects. Established under Act 2275 of the 2005 Arkansas General

[129] Martin Wachs, Ph.D., "A Quiet Crisis in Transportation Finance: Options for Texas," Horizon, Summer 2006, 13 - 18.

Assembly,e[130] a RMA can finance, design, construct, operate, maintain, acquire, expand or extend a project. Projects may be tolled or not tolled. A RMA has the authority to generate funds by imposing a sales tax, a motor vehicle tax or toll, issue bonds, or borrow/receive turnback funds. A RMA can generate money for the community by, for instance, developing a toll road. It can be financed by selling bonds and using the tolls collected to pay off the debt. Even after the toll road is paid, the community continues to keep the toll revenue for use on other local transportation projects.

Some benefits of a RMA include decision making at the local level, reduced project implementation time, use of locally generated funds in the area, and reduced intracounty competition.[131]

5.2.2. Utilization of Local Developers

Special local fees or taxes can be imposed on businesses and/or residents in a specified geographic area to pay for a highway development or expansion serving those businesses and/or communities. Local developers can also make contributions in land, right-of-way, technical support, and/or funds to expedite needed transportation projects.

Local impact fees are collected from developers by local governments to help pay for transportation and other public works resulting directly from new development. These are typically applied as a per-unit or ad valorum charge when the development units are sold. Property owners along the corridor can determine this annual fee that would be paid until the improvement is made and paid for. They can decide to continue this payment after the project completion and allocate the revenue for other transportation projects or for maintenance and operation of transportation systems.[132]

5.2.7. Specialized Funding Sources

Specialized funding sources include revenues earned from sources such as advertising billboards alongside the roads, naming rights of rest areas and facilities, and utility access fees (electric transmission lines, fiber optic cables, microwave towers, and cell towers) along highway corridors. These can be in the form of one time or annual payments, or the provision of in-kind services (such as access to a fiber optic network along highway rights of way). The latter is an example of what is referred to as "shared resources," whereby state or local governments receive access to services from utility infrastructure in exchange for private use of highway right-of-way. [133]

5.2.8. Merge the State Highway Department Fund into the General Fund

Instead of having earmarked or dedicated funds for transportation projects and services, as through a dedicated State Highway Department fund, transportation funds can be allocated as a certain percentage of the Arkansas State General Revenues. Using the State Highway Department fund as the allocation base, funds for transportation projects and services would be allocated from the Arkansas State General Revenues. The allocation base would currently be 7%.

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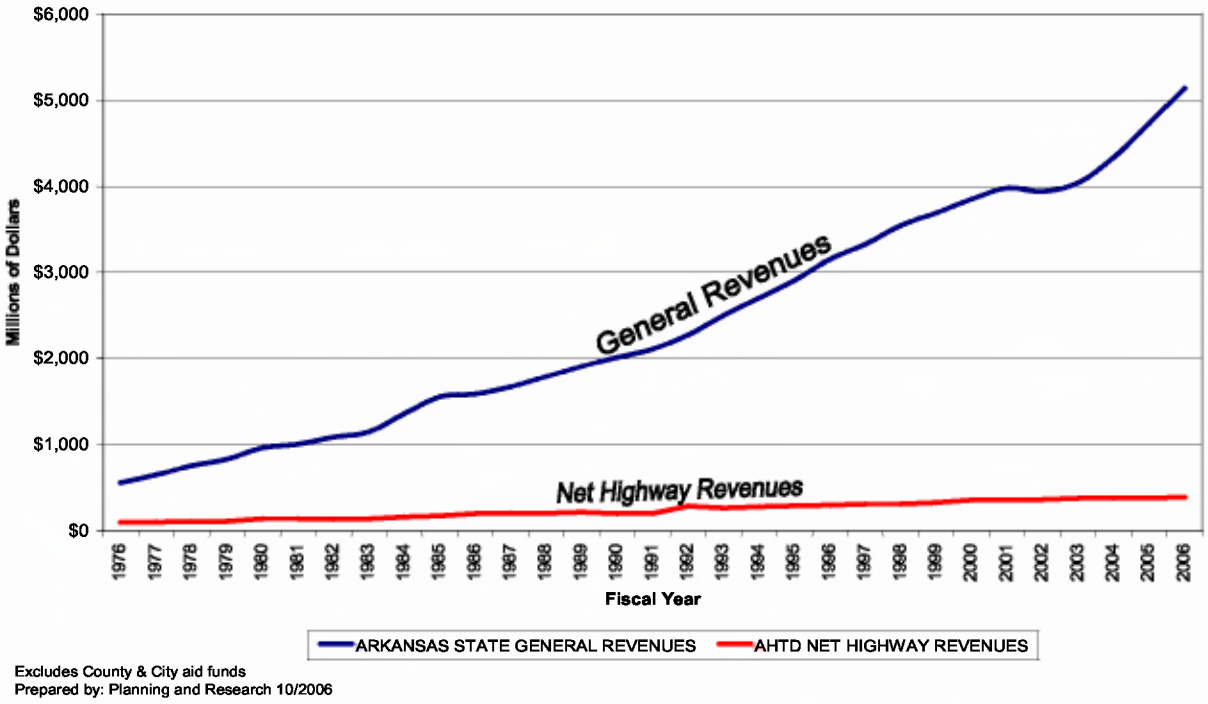
[130] Arkansas State Highway and Transportation Department, "2006 Arkansas State Highway Needs Study and Highway Improvement Plan," June 2006, 35.
[131] See note 72, 7.
[132] See note 50, 4-11.
[133] See note 50, 4-11.

The growth rate in the transportation fund would be higher if the State Highway Department fund was eliminated and its revenue sources merged into the General Fund. At 5.52%, the growth rate of the Arkansas State General Revenues[134] has outpaced that of the State Highway Department fund, which grew at 1.96% annually over the past ten years. If the two were combined, the growth in transportation funding would match that of the higher Arkansas State General Revenues. Figure 5-1[135]compares the Arkansas State General Revenues and AHTD Net Highway Revenues[136] over the past twenty years.

Figure 5-1. Arkansas State General Revenues vs. AHTD Net Highway Revenues



Excludes County & City aid funds
Prepared by: Planning and Research 10/2006

The State Highway Department fund has an elasticity of 0.57 with respect to gross state product (GSP). This inelasticity of transportation revenue sources means that AHTD revenues are not responsive to changing levels of GSP. As income levels rise, demands on the transportation system increase, but the inelastic nature of the State Highway Department fund means that funds to construct and maintain the transportation system has not kept pace with the rise in income. The General Budget revenue with the elasticity of 1.44 is more responsive to increases in the general income level in the state. As a result, allocation of transportation funds out of the combined State Highway Department fund and General Budget would be more responsive to increasing income levels.

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[134] The revenue components are taxes from: individual income, corporate income, sales tax, use tax, alcoholic beverage, tobacco, insurance , racing, severance, corporate franchise, estate, real estate transfer, and miscellaneous.
[135] Knighten Starnes (Arkansas State Highway and Transportation Department), e-mail to author, November 28, 2006. Arkansas State General Revenues vs. AHTD Net Highway Revenues.
[136] AHTD Net Highway Revenues excludes county and city aid funds.

A potential weakness of this proposal is that its implementation may require Constitutional changes to both merge the State Highway Department fund into the General Fund and fix the budgetary allocation for transportation projects and services as a certain dollar value of the General Fund. In addition, greater responsiveness of transportation funds to income fluctuation may result in less stable funding levels.

As a result of the November 2006 elections in Arkansas, reduction or complete elimination of the grocery sales tax is expected. This tax change would affect the size of the Arkansas State General Revenues and, consequently, the amount that is apportioned to all the agencies that are funded from this source. Before the Highway Department makes a decision whether to merge its funds with the General Budget, the affect of the grocery sales tax elimination has to be quantified and evaluated.

To analyze the proposed grocery sales tax cut (in 2007), the Regional Economic Model, Inc. (REMI) model was employed. The REMI model uses baseline values to develop a control forecast. The proposed grocery sales tax policy change is then incorporated into the model to generate an alternative forecast. The difference in the alternative forecast and the control forecast is the fiscal impact of the tax policy change. The hypothetical elimination of the grocery sales tax in 2007 would result in a tax revenue loss of $240 million. However, the $240 million increase in purchasing power leads to additional revenues and therefore the Arkansas State General Revenues losses $196M in a given year. Thus, the budget[137] decreases from $5.81 billion to $5.62 billion.

Table 5-7. Revenue Comparison (Expressed in millions)

	(1) AR State Gen. Rev. without highway-user revenues	(2) AHTD fund revenue, no changes	(3) AR State Gen. Rev. + highway user revenues – grocery sales tax	(4) AHTD fund revenue, 7% of the AR State General Revenues	(5) Difference between (2) and (4)
2006	5,141.00	387.50			
2007	5,420.87	395.84	5,620.81	393.97	-1.87
2008	5,715.97	404.35	5,920.83	415.00	10.65
2009	6,027.14	413.05	6,237.39	437.19	24.14
2010	6,355.25	421.94	6,570.69	460.55	38.61
2011	6,701.22	431.01	6,922.14	485.18	54.17
2012	7,066.03	440.29	7,292.52	511.14	70.86
2013	7,450.70	449.76	7,684.85	538.64	88.88
2014	7,856.30	459.43	8,098.33	567.62	108.19
2015	8,283.99	469.32	8,534.10	598.17	128.85
2016	8,734.96	479.41	8,993.97	630.40	150.99
Total					**673.47**

By merging the Highway Fund with the Arkansas State General Revenues and keeping the allocation base at 7%, the AHTD would be better off by a total of $673.47 million by 2010. The

[137] After its hypothetical merge with the Highway Fund.

growth of the AHTD fund after merging it with the Arkansas State General Revenues is presented in Table 5-7.

5.3. Revenue Options Matrix

Revenue Options	Description	Implementation Options	Revenue Potential	Pros	Cons
Motor Fuels Revenue	Increase motor fuel taxes.	Index motor fuel to a price index to keep up with inflation.	One cent increase raises $13.9 million per year. Indexing would add $13.9 million every two years.	High revenue potential for low tax rate; relatively stable revenue; easy to administer; linked to transportation; no significant affect on the price of gas.	Politically less feasible due to recent fuel price increases; diesel tax increase likely to be opposed by the American Trucking Association (ATA).
Motor Vehicle Registration Fees	Increase passenger vehicle and/or commercial truck registration fees.		$13.1 to $41 million.	Linked to transportation; promotes better air quality and a smart growth agenda.	Revenue may decrease as the sales of heavier vehicles and pickups decline.
Sales and Use Tax	Remove sales tax exemption on motor fuel. Increase the sales and use tax. Impose special tax on transportation related products.		Sales tax on fuel raises $254.8 million. .5 to 1.5% tax increase dedicated to AHTD raises $135.7 to $407.2 million 2 to 4% tax on specific transport. products raises $.1 to$.6million.	High revenue potential for low tax rate; difficult to evade.	May place undue burden on low income households. No clear link between the sales tax and transportation. Small revenue from special tax on transport. products.

Income Tax	Increase the corporate income tax and/or individual income tax.		1% increase would generate $14.6 million.	High revenue potential for low tax rate; difficult to evade.	Sensitive to economic downturns; not a clear link to transportation; may negatively effect the state's economic competitiveness.
Rental Car Fees	Increase the fees paid by car renters in Arkansas or on cars sold to rental car companies. Retain 100 percent of the tax revenue.		5% increase generates additional $.2 million. 100 percent retention of the current revenue provides additional $1.2 million.	Directly linked to transportation; would not be paid by most of the Arkansas residents.	Would affect residents who must rent a vehicle.
State Infrastructure Bank (SIB)		Establish SIB.		Control of state's own sources of capital and financial flexibility; leverages existing sources.	Complex founding process.
Tolling		Create new toll roads.	Potentially significant depending on the toll rate.	Directly linked to transportation; can be used to mitigate congestion; accelerates project construction.	High upfront costs; politically sensitive.
Privatization	Lease all or part of the toll road to a private firm. Create P3s to speed up and finance transportation projects.			Large lump sum; easier ac access to low-cost capital and markets for private debt.	Risky due to loss of control and fear of unknown.

Mileage-Based Road User Fees		Substitute motor fuel taxes with mileage-based road user fees.	Not estimated; likely significant.	Direct link to transportation; revenue based on vehicle miles traveled.	Privacy and environmental issues; retrofitting cost versus long phase-in.
Regional Mobility Authority (RMA)		Establish RMAs.	Not estimated.	Early project start; local ownership and control; elimination of intracounty competition.	
Utilization of Local Developers		Use local developers to make contributions in land or funds.	Not estimated; likely significant for a project.	Early project start; user pays.	Requires consensus among the developers and property owners.
Specialized Funding Sources		Implement specialized funding sources.	Not estimated.	Additional revenue sources.	Small revenue compared to needs.
Merge the State Highway Department Fund with AR State Gen. Revenues	Merge the State Highway Department Fund with AR State Gen. Revenues	Make the Highway Fund allocation base 7% of AR State Gen. Revenues	$659.56 million over 10-year period.	Higher revenue growth.	Requires Constitutional changes; greater responsiveness to income fluctuation and hence less stable funding levels.

5.4. Infrastructure Categorization

Infrastructure can be categorized according to who its beneficiaries are. Infrastructure direct beneficiaries are parties that are the most likely to be interested in its development and maintenance, and hence, will be willing to invest in it. The revenue tools can be viewed by the type of the beneficiaries that are going to use the infrastructure. There are three main beneficiaries in Arkansas:

1. Entities that benefit from economic development;
2. Trucking companies that use Arkansas as a pass-through state; and
3. Private individuals.

Entities that benefit from **economic development** are primarily private businesses and individuals in a particular economic area of the state. It is in the state's interest to provide reliable infrastructure to support the growth of the economy and private businesses and local governments share this interest. The most suitable financing tools for this category are:

Corporate income tax

Creation of RMAs
Public-Private Partnerships

Arkansas is used as a pass-through state by **trucking companies**. Trucking companies select roads that will allow them to get from point A to point B in a fast and efficient manner. Therefore, they are interested in well-maintained roads that will secure safe and timely delivery of their products. Many trucking companies are willing to pay extra to use the benefits of uncongested, well-maintained roads that will decrease the time of their delivery. There is a second reason why trucks should share the cost of highway/infrastructure maintenance. Due to their weight, trucks contribute to road damage and air pollution more than personal automobiles and therefore it is equitable to make them liable for some of the cost associated with the highway repair. The most suitable financing tools for this category are:

Motor fuel tax
Registration fees
Tolls
Mileage based road fees

Private individuals use highways for commuting to and from work on a daily basis. (VMT in Arkansas is 31,648). The revenue tools that can be implemented for this category of economic beneficiaries of the infrastructure system are:

Motor fuel tax
License and registration fees
Local developer tax
Mileage-based road fees

5.5. Conclusion

Chapter 5, "Closing the Funding Gap," addresses several options the AHTD has for closing the anticipated gap. Over the next decade, more than $19 billion in needs have been identified, while anticipated funding is about $4 billion, which results in a $15 billion shortfall. In order to close the gap, AHTD must combine its traditional sources of revenue with innovative financing techniques. By using combinations of motor fuel revenues, motor vehicle registration fees, sales tax, income tax, and rental car fees together with innovative financing techniques such as SIB, tolling, and privatization, the department can achieve its objective. Several other alternative financing techniques are also described in Chapter 5 and recommended for further consideration. These include: mileage-based road user fees, RMAs, utilization of local developers, and specialized funding sources. The use of innovative financing techniques accelerates the availability of funds, creating opportunities to generate transportation and economic benefits for Arkansas residents in the near term. Innovative financing tools can also reduce the likelihood of unanticipated project cost increases resulting from inflation.

Furthermore, Chapter 5 also presents revenue option matrix that summarizes the estimates of additional funds that can be generated by implementing each financing option, and lists the advantages and disadvantages. To adhere to the principle "user pays," infrastructure direct beneficiaries should share the costs of infrastructure improvements and, thus, the infrastructure may be categorized by the main type of users and the financing tools may be matched to it accordingly.

Appendix A: Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
AC	Advance Construction
AHTD	Arkansas State Highway and Transportation Department
ATA	American Trucking Association
CCI	Construction Cost Index
CDA	Comprehensive Development Agreement
CPI	Consumer Price Index
cpg	Cents per gallon
DOT	Department of Transportation
FHWA	Federal Highway Administration
FY	Fiscal year
GAN	Grant Anticipation Note
GAO	Government Accountability Office
GARVEE	Grant Anticipation Revenue Vehicle
GO Bonds	General Obligation Bonds
GSP	Gross State Product
GPS	Global Positioning Systems
HIP	Highway Improvement Program
HOV	High Occupancy Vehicle
IRP	Interstate Rehabilitation Program
IRP	Interstate Rehabilitation Program
ISTEA	Intermodal Surface Transportation Efficiency Act
MOE	Maintenance of Effort
ODOT	Oregon Department of Transportation
PCAC	Partial Conversion of Advance Construction
P3	Public-Private Partnership
PPP	Public-Private Partnership
ROI	Return on Investment
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act Legacy for Users
SHD	State Highway Department
SIB	State Infrastructure Bank
STIP	State Transportation Improvement Program
TE-045	Innovative Finance Program Test and Evaluation Project
TEA-21	Transportation Equity Act for the 21st Century
TIFIA	Transportation Infrastructure Finance and Innovation Act
TxDOT	Texas Department of Transportation
TDOT	Tennessee Department of Transportation

Appendix B: Simulation and Scenario Analysis of Toll Roads in Arkansas

The financial simulations discussed in Appendix B are based on Wilbur Smith Associates' (WSA, 2002) analysis of toll roads in Arkansas. In one scenario, WSA's study considered the financial feasibility of six highway projects funded with several innovative finance techniques (WSA, 2002, p. 46-56).[138] The projects included: proposed highway 63, proposed North Belt (full project), proposed highway 71 Bella Vista segment, proposed highway 71 Fort Smith segment, proposed highway 49 River Crossing, and proposed highway 82 River Crossing. Three innovative finance techniques that were also considered included toll revenue bonds, a TIFIA loan, and funds from an AHTD TIP allocation. Table B-1 reproduces the summary of the feasibility analysis.

Table B-1: Base Case

Sources	Toll Revenue Bonds	TIFIA Loan	AHTD TIP Funds	Total
Par Amount of Bonds	$765,328,694	$134,568,242	$0	$899,896,936
AHTD TIP	$0	$0	$186,600,000	$186,600,000
Total	$765,328,694	$134,568,242	$186,600,000	**$1,086,496,936**
Uses				
Construction Fund	$561,206,077	$134,568,242	$186,600,000	$882,374,319
Capitalized Interest Fund	$71,473,693			$71,473,693
Debt Service Reserve Fund	$76,532,869			$76,532,869
Underwriter's Discount	$11,479,930			$11,479,930
Cost of Insurance	$3,826,643			$3,826,643
Muni Bond Insurance	$40,808,231			$40,808,231
Contingency	$1,251			$1,251
Total	$765,328,694	$134,568,242	$186,600,000	**$1,086,496,936**
Total Construction Fund Draws	$621,334,555	$134,568,242	$186,600,000	$942,502,797
Total Cost of Project				$1,374,000,000
Funding(Surplus/Debt)				-$431,497,203

WSA's financial analysis found that the base case produced a significant shortfall of funds ($431.5 million), and thus, it was not feasible (WSA, 2002, page S-50). The firm noted that the combined project suffered from the low feasibility of the two river crossing projects due to their high capital cost and low toll revenue potential.

Appendix B considers several innovative finance techniques, and it analyzes their effects on the financial feasibility of this scenario. The proposed finance techniques utilize GARVEE bonds, but instead of pledging future federal funds, state tax revenues are pledged. The presumption is that the state approves tax increases to fund highway projects, and that the tax revenue funds are then obligated to service the debt (back-stop GARVEE bonds). The different scenarios follow.

[138] Wilbur Smith Associates. *Summary Report Preliminary Toll Feasibility Assessment for Toll Highways in Arkansas*, June 2002.

Scenario 1: Income Tax Bond

A 1% increase in personal income tax rate was estimated to add $18.75 million to state revenue. The AHTD share of the revenue would be $12.7 million and the department could use this amount to service a GARVEE bond (income tax bond).

For comparative purpose, the GARVEE bond will be subject to the same financial considerations and obligations as toll revenue bonds in WSA's study. To estimate the amount of funds available from the income tax bond, the bond was assumed to have a 10-year term with an annual payment of $12,732 million at an annual market rate of 5%. Under these financial characteristics, the par value of the bond would be $98,310 million in today's dollars. The financial details are shown in Table B-2. The distribution of these funds to various uses is in proportion to those weights used for the toll revenue bond. The total amount available for the construction fund in today's dollars is $72.09 million.

Table B-2: Incremental Income Tax Revenue and Its Allocations

Number of Years	n		10
Annual Interest Rate	I/Y		0.05
Annual Payment	PMT	$	(12,732)
Income Tax Bond @ PAR:	PV		$98,311
Uses of Funds	**Use Weights**		**Adjusted Allocations**
Construction Fund	73%		$72,090
Capitalized Interest Fund	9%		$9,181
Debt Service Reserve Fund	10%		$9,831
Underwriter's Discount	1%		$1,475
Cost of Insurance	0%		$492
Muni Bond Insurance	5%		$5,242
Contingency	0.00016%		$0
Total	**100%**		**$98,311**
Units ($)	1,000		
Adjustment 2002 $	0.924		

In Table B-3, the income tax bond funds are combined with the base case funds. Since the base case dollars are for the year 2002 and the income tax bond dollars are today's dollars, the income tax dollars were adjusted to 2002 dollars. Also, the income tax bond funds deposited in the construction funds are assumed not to earn interest income over the construction period.

The AHTD's share of a 1% income tax increase would add $66.6 millions to the base case construction fund. This would increase the project support by 6.6% to 75.2% of the total cost of the project.

Table B-3: Income Tax Bond

Sources	Toll Revenue Bonds	TIFIA Loan	AHTD TIP Funds	Income Tax Bond	Total
Par Amount of Bonds	$765,328,694	$134,568,242	$0		$899,896,936
AHTD TIP	$0	$0	$186,600,000		$186,600,000
Par Amount of Bonds				$90,854,425	$90,854,425
Total	$765,328,694	$134,568,242	$186,600,000	$90,854,425	**$1,086,496,936**
Uses					
Construction Fund	$561,206,077	$134,568,242	$186,600,000	$66,622,427	$948,996,746
Capitalized Interest Fund	$71,473,693			$8,484,853	$79,958,546
Debt Service Reserve Fund	$76,532,869			$9,085,442	$85,618,311
Underwriter's Discount	$11,479,930			$1,362,816	$12,842,746
Cost of Insurance	$3,826,643			$454,272	$4,280,915
Muni Bond Insurance	$40,808,231			$4,844,465	$45,652,696
Contingency	$1,251			$149	$1,400
Total	$765,328,694	$134,568,242	$186,600,000	$90,854,425	**$1,177,351,361**
Total Construction Fund Draws	$621,334,555	$134,568,242	$186,600,000	$90,854,425	$1,033,357,222
Total Cost of Project					$1,374,000,000
Funding(Surplus/Debt)					-$340,642,778
% Project Support					**75.2%**

Scenario 2: Motor Fuel Tax Increase of 1 Cent

Another option for a back-stop GARVEE bond is to pledge the revenues from an increase in motor fuel taxes. This section estimates the changes in tax revenues and their effects on the feasibility of the base case of a 1 cent increase in the motor fuel taxes.

Table B-4 presents the financial details of a motor fuel bond. According to the estimate in Chapter 5, a 1 cent motor fuel tax increase would generate a $9.8 million annually. This flow of funds could support a $75.3 million bond issue in today's dollars under the assumed financial characteristics. The AHTD's share of a 1 cent motor fuel tax increase would add $55.2 million to the base case construction fund.

Table B-4: Incremental Motor Fuel Tax Revenue and Its Allocations

Number of Years	n	10
Annual Interest Rate	I/Y	5%
Annual Payment	PMT	($9,752)
Income Tax Bond @ PAR:	PV	$75,300

Uses	Use Weights	Adjusted Allocations
Construction Fund	73%	$55,217
Capitalized Interest Fund	9%	$7,032
Debt Service Reserve Fund	10%	$7,530
Underwriter's Discount	1%	$1,130
Cost of Insurance	0%	$377
Muni Bond Insurance	5%	$4,015
Contingency	0.00016%	$0
Total	**100%**	**$75,300**
Units ($)	1,000	
Adjustment 2002 $	0.924	

Table B-5 shows the results from combining a 1 cent motor fuel tax bond with the base case innovative finance techniques. As demonstrated, the motor fuel tax bond would add $51 million to the base case construction fund. This would increase the project support by 5.1% to 73.7% of the total cost of the project.

Table B-5: Motor Fuel Tax Bond

Sources	Toll Revenue Bonds	TIFIA Loan	AHTD TIP Funds	1 Cent Motor Fuel Tax	Total
Par Amount of Bonds	$765,328,694	$134,568,242	$0		$899,896,936
AHTD TIP	$0	$0	$186,600,000		$186,600,000
Par Amount of Bonds				$69,589,135	$69,589,135
Total	$765,328,694	$134,568,242	$186,600,000	$69,589,135	**$1,086,496,936**
Uses					
Construction Fund	$561,206,077	$134,568,242	$186,600,000	$51,028,853	$933,403,172
Capitalized Interest Fund	$71,473,693			$6,498,897	$77,972,590
Debt Service Reserve Fund	$76,532,869			$6,958,913	$83,491,782
Underwriter's Discount	$11,479,930			$1,043,837	$12,523,767
Cost of Insurance	$3,826,643			$347,946	$4,174,589
Muni Bond Insurance	$40,808,231			$3,710,575	$44,518,806
Contingency	$1,251			$114	$1,365
Total	$765,328,694	$134,568,242	$186,600,000	$69,589,135	**$1,156,086,071**
Total Construction Fund Draws	621,334,555	134,568,242	186,600,000	69,589,135	1,012,091,932
Total Cost of Project					1374000000
Funding(Surplus/Debt)					(361,908,068)

Scenario 3: Corporate Income Tax Increase of 1%

Tax revenues from an increase in corporate income taxes could also fund a GARVEE bond. This section estimates the changes in tax revenues and their effects on the feasibility of the base case of a 0.5 % increase in motor fuel taxes.

Table B-6 presents financial details of a corporate income tax bond. According to the estimate from Chapter 5, a 1% increase in the corporate income tax would generate a $1.9 million annually. This flow of funds could support a $14.5 million bond issue in today's dollars under the assumed financial characteristics. The AHTD share of a corporate income tax increase would add $10.6 million to the base case construction fund.

Table B-6: Incremental Corporate Income Tax Revenue and Its Allocations

Number of Years	n		10
Annual Interest Rate	I/Y		0.05
Annual Payment	PMT	$	(1,883)
Income Tax Bond @ PAR:	PV		$14,540

Uses	Use Weights	Adjusted Allocations
Construction Fund	73%	$10,662
Capitalized Interest Fund	9%	$1,358
Debt Service Reserve Fund	10%	$1,454
Underwriter's Discount	1%	$218
Cost of Insurance	0%	$73
Muni Bond Insurance	5%	$775
Contingency	0.00016%	$0
Total	**100%**	**$14,539.58**
Units ($)	1,000	
Adjustment 2002 $	0.924155609	

Table B-7 shows the results from combining a 1% corporate income tax bond with the base case innovative finance techniques. As demonstrated, the construction fund is increased by $9.9 million. This increases the project support by 1% to 69.6% of the total cost of the project.

Table B-7: Corporate Income Tax Bond

Sources	Toll Revenue Bonds	TIFIA Loan	AHTD TIP Funds	Corporate Income Tax	Total
Par Amount of Bonds	$765,328,694	$134,568,242	$0		$899,896,936
AHTD TIP	$0	$0	$186,600,000		$186,600,000
Par Amount of Bonds				$13,436,833	
Total	$765,328,694	$134,568,242	$186,600,000	$13,436,833	**$1,086,496,936**
Uses					
Construction Fund	$561,206,077	$134,568,242	$186,600,000	$9,853,064	$892,227,383
Capitalized Interest Fund	$71,473,693			$1,254,860	$72,728,553
Debt Service Reserve Fund	$76,532,869			$1,343,683	$77,876,552
Underwriter's Discount	$11,479,930			$201,552	$11,681,482
Cost of Insurance	$3,826,643			$67,184	$3,893,827
Muni Bond Insurance	$40,808,231			$716,468	$41,524,699
Contingency	$1,251			$22	$1,273
Total	$765,328,694	$134,568,242	$186,600,000	$13,436,833	**$1,099,933,769**
Total Construction Fund Draws	$621,334,555	$134,568,242	$186,600,000	$13,436,833	$955,939,630
Total Cost of Project					$1,374,000,000
Funding(Surplus/Debt)					-$418,060,370
% Project Support					**69.6%**

Scenario 4: Sales and Use Tax Increase of 0.5%

Another option for a back-stop GARVEE bond is to pledge revenue from an increase in the state's sales and use tax. This section estimates the 0.5 % change in tax revenue and its effect on the feasibility of the base case.

Table B-8 shows the financial details of the GARVEE bond. The $135 million tax revenue increase could support a $1 billion bond issue and add $768 million to the construction fund.

Table B-8: Incremental Sales and Use Tax Revenue and Its Allocations

Number of Years	n		10
Annual Interest Rate	I/Y		0.05
Annual Payment	PMT	$	(135,744)
Income Tax Bond @ PAR:	PV		$1,048,176
Uses	**Use Weights**	**Adjusted Allocations**	
Construction Fund	73%		$768,615
Capitalized Interest Fund	9%		$97,889
Debt Service Reserve Fund	10%		$104,818
Underwriter's Discount	1%		$15,723
Cost of Insurance	0%		$5,241
Muni Bond Issuance	5%		$55,890
Contingency	0.00016%		$2
Total	**100%**		**$1,048,176**
Units ($)	1,000		
Adjustment 2002 $	0.924		

Table B-9 shows the results from combining 0.5% sales and use tax increase bond with the base case innovative finance techniques. As shown in Table B-9, the construction fund is increased by $710 million. This increases the project support by 70.5% to 139.1% of the total cost of the project. This combination of innovative finance techniques has made the base case financially feasible.

Table B-9: Sales and Use Tax Bond

Sources	Toll Revenue Bonds	TIFIA Loan	AHTD TIP Funds	0.5% Sale Tax	Total
Par Amount of Bonds	$765,328,694	$134,568,242	$0		$899,896,936
AHTD TIP	$0	$0	$186,600,000		$186,600,000
Par Amount of Bonds				$968,677,734	
Total	$765,328,694	$134,568,242	$186,600,000	$968,677,734	**$1,086,496,936**
Uses					
Construction Fund	$561,206,077	$134,568,242	$186,600,000	$710,319,416	$1,592,693,735
Capitalized Interest Fund	$71,473,693			$90,464,366	$161,938,059
Debt Service Reserve Fund	$76,532,869			$96,867,773	$173,400,642
Underwriter's Discount	$11,479,930			$14,530,165	$26,010,095
Cost of Insurance	$3,826,643			$4,843,388	$8,670,031
Muni Bond Insurance	$40,808,231			$51,651,042	$92,459,273
Contingency	$1,251			$1,583	$2,834
Total	$765,328,694	$134,568,242	$186,600,000	$968,677,734	**$2,055,174,670**
Total Construction Fund Draws	$621,334,555	$134,568,242	$186,600,000	$968,677,734	$1,911,180,531
Total Cost of Project					$1,374,000,000
Funding(Surplus/Debt)					$537,180,531
% Project Support					**139.1%**

Appendix C: Disposition of Highway Fees and Taxes

This section presents tabular information on the legal provisions governing the disposition of State motor fuel tax receipts and the disposition of State motor vehicle, motor carrier, and driver license revenues for the selected states. The information was adopted from *Highway Taxes and Fees: How They are Collected and Distributed* that was published by the Office of Highway Policy Information in 2001.[139] Due to the time lag, information on motor fuel tax rates for some states in the study may be outdated, but were retained in these tables for consistency purposes. Chapter 3 provides the most currently available data on motor fuel tax rates.

[139] Office of Highway Policy Information, Highway Funding and Motor Fuels Division. *Highway Taxes and Fees: How They are Collected and Distributed*, Tables MF-106 and MV-106, June 2001.

C.1. Provisions Governing the Disposition of State Motor Fuel Tax Receipts

C.1.1. Alabama

NAME OF FUND OR AGENCY	AMOUNT OF PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
			Rates shown composed of the following parts:
Gasoline: 18 Cents	-	-	7¢ and 5¢ in §40-17-31; 4¢ in §40-17-220; 2¢ in §8-17-87
Diesel: 19 Cents	-	-	13¢ in §40-17-2; 4¢ in §40-17-220; 2¢ in §8-17-87
LPG: 17 Cents Gasohol: 18 Cents	- -	- -	13¢ in §40-17-2; 4¢ in §40-17-220; In-State vehicles must pay annual flat fee in lieu of excise tax. Same as gasoline.
			Rates shown for gasoline, diesel and gasohol include 2 cents per gallon inspection fee.
	2 cents (gasoline/diesel)		This represents the inspection fee.
Department of Agriculture and Industries	Amount required	Refunds of inspection fee.	
Agricultural Fund	$2,100,000	Collection and administration of inspection fee.	Monthly payments of $175,000.
	Net Revenue	Distributed as follows:	
Counties	13.87 %	Construction, reconstruction, resurfacing, restoration, and rehabilitation.	Distributed equally among the counties.

State Public Road and Bridge Fund	$4,907,772	For use in matching federal-aid discretionary funds.	Monthly payments of $408,981.
Municipalities Public Road and Bridge Fund	2.76 % Remainder	Planning, construction, maintenance and debt service. See authorized distribution below.	Distributed as follows: 45.45 % distributed equally and 54.55 % based on population.
	16 cents (gasoline), 17 cents (diesel/LPG)		
Department of Revenue	Amount required	Refunds of motor-fuel tax.	Only 15 cents per gallon of gasoline is refunded for agricultural use.
Department of Revenue	Appropriation	Collection and administration of tax.	
State Department of Aeronautics	Tax on aviation use	Promotion of aviation.	
Department of Conservation	0.35 % (gasoline)	To improve boating and boating facilities, seafood and salt water sports fishing.	Sixty % to the State Water Safety Fund of the Water Safety Division and 40 % to the Seafood Fund of the Seafood Division. Does not apply to aviation fuel.
	Net revenue	Distributed as follows:	
	13 cents (gasoline)		Composed of the 7 cent tax, 2 cents of the 5 cent tax, and the 4 cent tax. Also receives taxes on lubricating oil. (See Table S-106). (See State code §40-17-72; §40-17-74.1; §40-17-223; and §40-17-162).

Counties and Municipalities	55 %	Resurfacing, restoration, rehabilitation of roads, bridges and streets.	Allocation to counties of 45.45 % distributed equally among 67 counties and 54.55 % distributed based on population. Of each county's allocation, 10 % distributed to municipalities based on municipal population ratio.
State Public Road and Bridge Fund	45 %	See authorized distribution below.	(See State code §40-17-72; §40-17-223)
State Public Road and Bridge Fund	3 cents (gasoline), 17 cents (diesel), 17 cents (LPG)	Distributed as follows:	Also receives motor-fuel distributors license filing fee (§40-12-193), annual LPG permit fees (§40-17-162), and 75 % of fines relating to motor-fuel tax laws (§40-12-202). (See State code §40-17-13; §40-17-72; §40-17-74.1; §40-17-222; §40-17-223).
Highway Sinking Fund	9/21	Debt service of bonds issued by Alabama Highway Finance Corporation.	
Highway Sinking Fund	Amount Required	Debt service of bonds issued by Alabama Highway Finance Corporation.	To be used only to the extent that motor-vehicle license taxes and registration fees are insufficient to cover debt service on all bonds.
Counties	Amount Required	Amount needed to bring each county up to the base annual county distribution ($550,000 per county) if not achieved under the 55 % distribution above.	
Department of Conservation and Natural Resources	$500,000	Construction, maintenance, and repair of public roads in the park system.	

State Department of Transportation	Remainder	Administration, construction, and maintenance of State highways.	

C.1.2. Arkansas

NAME OF FUND OR AGENCY	AMOUNT OF PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
			Rates shown are composed of the following parts:
Gasoline: 20.5 Cents	-	-	8.5¢ in§26-55-205(a); 1¢ in§26-55-205(b); 4¢ in§26-55-1002; 5¢ in§26-55-1201; 2¢ in§26-55-1006
Diesel: 22.5 Cents	-	-	9.5¢ in§26-56-201(a)(1), 1¢ in(a)(2), 4¢ in(d); 2¢ in26-56-502; 2¢ in§26-56-601; 4¢ in§26-56-201(e)
LPG: 16.5 Cents	-	-	7.5¢ in§26-56-301; 4¢ in§26-56-502; 5¢ in§26-56-601
Gasohol: 20.5 Cents	-	-	Same as gasoline.
Petroleum Storage Tank Fund	0.1 cent (gasoline/diesel)	Clean-up of tank spills.	This is the Petroleum Environmental Assurance Fee. This fee continues until the balance in the Petroleum Storage Tank Trust Fund reaches $15,000,000. The fee is then adjusted quarterly, whenever the Trust Fund falls below $12,000,000 or exceeds $15,000,000.
State Apportionment Fund	20.5 cents gas; 22.5 cents diesel; 16.5 cents LPG	Distributed as follows:	This is a common fund receiving motor-fuel and motor-vehicle revenues and distribution is made from combined revenues.

Constitutional and Fiscal Agencies Fund	3 %	Cost of general State government, including the cost of collection and administration Constitutional and Fiscal of motor-fuel taxes.	Three % of gross collection is deducted each month prior to distribution.
Interstate Motor- Fuel Tax Refund Fund	Amount required	Paying refunds for overpayment of motor-fuel taxes and special motor- fuel taxes by interstate users.	The estimated amount of refund is determined quarterly by the Director of the Department of Finance and Administration.
Gasoline Tax Refund Fund	Amount required	Gasoline tax refunds for agricultural use.	Certified by Commissioner of Revenues. Not to exceed $2,500,000 during any fiscal year.
	1 cent	Distributed as follows:	Additional 1 cent tax on gasoline, gasohol, and diesel.
State-Aid Road Fund (Counties)	$13,000,000	Construction, reconstruction, and improvement of roads on the State-aid road system (County).	Distributed among the 75 counties as follows: 25 % on area, 25 % on rural population, and 50 % equally. Must be matched by 10 % of county funds.
State Highway Special Construction Account	Remainder	Construction of roads and highways on the State highway system.	
	Remainder	Distributed as follows:	
County-Aid Fund	15 %	Construction, maintenance, and administration of county roads.	Distributed monthly among the 75 counties as follows: 31 % on area, 17.5 % on motor-vehicle licenses fees, 17.5 % on total population, 13.5 % on rural population, and 20.5 % equally. No county may use more than 20 % of revenues for public transportation.

Municipal-Aid Fund	15 %	Construction, maintenance, and administration of municipal streets.	Distributed monthly among municipalities on population basis as per latest Federal census. Cities with population greater than 50,000 may use no more than 10 % of revenues for public transportation. Cities with population less than or equal to 50,000 may use no more than 20 % of revenues for public transportation.
State Highway and Transportation Department Fund	70 %	Construction, maintenance and administration of State highways.	

C.1.3. Mississippi

NAME OF FUND OR AGENCY	AMOUNT OF PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
Gasoline: 18.4 Cents	-	-	18¢ in §27-55-11
Diesel: 18.4 Cents	-	-	18¢ in §27-55-313
LPG: 17 Cents	-	-	-
Gasohol: 18.4 Cents	-	-	Same as gasoline.
			The rates shown for gasoline, diesel, and gasohol do not include a 0.4 cent Environmental Protection Fee. This fee was discontinued when the unobligated fund balance reached $10,000,000 and will be reimplemented when the balance falls below $6,000,000.
Groundwater Protection Trust Fund	0.4 cent Environmental Protection Fee	Cleanup of underground storage tank leaks.	

	11 cents (gasoline), 8 cents (diesel), 9 cents (LPG), 4.75 cents (other oil)	Distributed as follows:	This distribution includes all gasoline taxes in excess of 7 cents, diesel taxes exceeding 10 cents, LPG taxes in excess of the June 30, 1987 rate (8 cents), aviation gas taxes in excess of 6.4 cents, other oil taxes exceeding 1 cent, and taxes on jet fuel exceeding 5.25 cents.
State-Aid Road Fund	23.25 % or $4,000,000	Construction and reconstruction of state-aid road system, and administrative costs of division.	Distribution is the greater of 23.35 % of amount apportioned by 27-5-101(a) or $4,000,000. Amount distributed monthly. Allocated to counties on following basis: $833.33 monthly to each county, remainder on statutory percentage basis.
State Highway Fund	2 cents (gasoline)	Construction, reconstruction, and maintenance of highways, or debt service on highway bonds.	
State Highway Fund	Remainder	Construction, reconstruction, and maintenance of highways, or debt service on highway bonds.	Of all State highway funds, an amount equal to the difference between $42,000,000 and the annual debt service for certain refunding bonds are to be expended for the four-lane highway program.
	7 cents (gasoline), 10 cents (diesel), 8 cents (LPG), 6.4 cents (aviation gas), 1 cent (other oil)	Distributed as follows:	Also receives proceeds of 5.25 cents tax on jet fuel.

State Highway Fund	20 %	Construction, reconstruction, and maintenance of highways.	The 20 % shall be reduced to a lower percentage if the 20 % should reduce any county to a lesser amount than that received in the fiscal year ended June 30, 1966.
State Tax Commission	Amount required	Refunds for nonhighway use.	
State Highway Fund	5 %	Construction, reconstruction, and maintenance of highways, or debt service on highway bonds.	
Fisheries and Wildlife Fund	Appropriation	To defray expenses of the Department of Wildlife, Fisheries, and Parks.	
Aeronautics Commission Fund	6.4 cents (aviation gas)	Construction and improvement of airports.	Also receives proceeds of 5.25 cents tax on jet fuel.
	Remainder	Distributed as follows:	
Transportation Department	9/14	Distributed as follows:	This fund also receives certain motor-vehicle and other tax revenues. Beginning August 15, 2002, the State will distribute 1/6 of the principal and interest due on semiannual bond and interest payment to the Gaming Counties Bond Sinking Fund.
Highway Bonds Sinking Fund	Amount required	Debt service on State highway bonds.	This allocation has priority over all others, but is deducted from the 9/14 State share. As of January 1, 1995, highway bonds are paid off.
County Road Protection Fund - Coast Counties	Amount required	Debt service on sea wall bonds, sea wall construction, and maintenance (as road	Returned to Hancock, Harrison and Jackson Counties.

		protection in coast counties).	
Municipal-Aid Fund	$1,000,000	Municipal streets and related usage.	Distributed on a per capita basis - the amount paid out of the 9/14 when added to the amount paid out of the 5/14 below cannot exceed $65,000 to any one municipality in any one calendar year.
State Highway Fund	Remainder	State highway construction, maintenance, administration, and matching Federal aid.	1/3 of the 9/14 is designated for road construction.
County Road Fund	5/14	Distributed as follows:	
Municipal-Aid Fund	See remarks	Municipal streets and related usage.	1/12 of product of the total population of all incorporated municipalities in each county times 75 cents. The amount of deductions made and payable to any municipality from any one county's funds shall not exceed $40,000 in any one calendar year.
County Road Fund	Remainder	Debt service for county roads and road districts; construction and maintenance of roads and bridges in counties.	

C.1.4. Missouri

NAME OF FUND OR AGENCY	AMOUNT OF PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
Gasoline: 17 Cents	-	-	-
Diesel: 17 Cents	-	-	-
LPG: 17 Cents	-	-	-

Gasohol: 17 Cents	-	-	-
			Rates shown do not include inspection fee. (§414.082)
Motor-Fuel Tax Fund	All	Distributed as follows:	
State Highways and Transportation Department Fund	$9,204,000	City and county share of cost of collection and refunds of motor-fuel collections.	Represents monthly payments of $767,000. This is a predetermined amount that is recalculated annually.
	Net revenue from first 11 cents	Distributed as follows:	Certain motor-vehicle revenues and other revenues are distributed in the same manner.
To incorporated cities and towns	15 %	Construction, maintenance, policing, street lighting, street cleaning, and service of debt incurred prior to the effective date of this section.	Distributed on ratio of population of city, town or village to the total like population of the State. This fund also receives certain motor-vehicle revenues and other revenues.
County-Aid Road Trust Fund	10 %	Construction, reconstruction, and maintenance of County roads.	Distributed 50 % on ratio of miles of county roads to total miles of county roads in State and 50 % on ratio of rural land valuation to total rural land valuation in State. Recalculated annually. This fund also receives certain motor-vehicle revenues and other revenues.
State Highways and Transportation Department Fund	75 %	Distributed as follows:	This is a common fund receiving motor-fuel, motor-vehicle, motor-carrier, and other revenues.
	Appropriation	Collection costs and refunds of motor-fuel taxes, motor-vehicle receipts, etc.;	

		Highway-related activities of the Highway and Transportation Commission and Department of Public Safety, State Auditor, Treasurer, Secretary of State, Department of Consumer Affairs - Regulation and licensing, as well as employee retirement costs, workman's compensation, etc.	
State Road Fund	Remainder	Land acquisition, construction, reconstruction and maintenance of State highways and bridges, including municipal extensions thereof, State parks, public areas, State institutions, etc.	Expended under direction and supervision of Highway and Transportation Commission.
	Remainder	Distributed as follows:	
To incorporated cities and towns	15 %	See above.	
County-Aid Road Trust Fund	15 %	See above.	
State Highways and Transportation Department Fund	70 %	See above.	

C.1.5. Oklahoma

NAME OF FUND OR AGENCY	AMOUNT OF PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
			Rates shown composed of the following parts:
Gasoline: 17 Cents	-	-	16 cents in §68-500.4(1); 1 cent in §17-354
Diesel: 14 Cents	-	-	13 cents in §68-500.4(2), 1 cent in §17-354
LPG: 17 Cents	-	-	5.5¢ in §68-703; 1¢ in §68-705; 2.5¢ in §68-707.1; 1¢ in §707.2; 6¢ in §68-707.3; 1¢ in 17-354
Gasohol: 17 Cents	-	-	Same as gasoline.
			Rates shown include additional 1 cent per gallon to fund the Petroleum Storage Tank Release Environmental Cleanup Indemnity Fund.
Petroleum Storage Tank Release Environmental Cleanup Indemnity Fund	1 cent	Distributed as follows:	
Corporation Commission	$1,000,000	Regulatory activities associated with the exploration and production of oil and gas.	
Environmental Trust Revolving Fund	$1,000,000	Cleanup of abandoned oil and gas processing and refining sites.	
State Transportation Fund	Remainder	Construction, repair, and maintenance of State highways.	When the balance of the Petroleum Storage Tank Release Indemnity Fund falls below $5,000,000, the additional 1 cent tax is to be deposited in the Indemnity Fund for 90 days.

			Tax from 97.5 % of all fuels used on turnpikes, not exceeding $1,000,000 per year, or $3,000,000 per year if additional bonds are sold, is deducted from State Transportation Fund and paid to Turnpike Authority. This fund also receives certain motor-vehicle revenues.
	16 cents (gasoline, gasohol)	Distributed as follows:	
Native American Indian Tribes	4.5 %		These funds are deemed to be in lieu of tribal tax revenues that the tribes would have otherwise collected on sales of motor fuels.
Aeronautics Commission Revolving Fund State Transportation Fund	$3,000 monthly $250,000 monthly	 Construction, repair, and maintenance of State highways.	Estimated amount of tax paid on gasoline consumed by engines to propel aircraft.
	Remainder	Distributed as follows:	
General Revenue Fund	1.625 %	Collection and administration of tax.	
	63.75 %	Distributed as follows:	
Public Transit Revolving Fund	$850,000	For establishing, expanding, improving, and maintaining rural and urban mass transportation services. Fund administered by State DOT.	
Railroad Maintenance Revolving Fund	$850,000	For rail planning; administration of railroad assistance projects; rail	

		service continuation payments; and the acquisition, construction, reconstruction, repair, maintenance, and operation of railroad right-of-way and trackage. Fund administered by State DOT.	
State Transportation Fund	Remainder	Construction and maintenance of State Highways.	Tax from 97.5 % of all fuels used on turnpikes is deducted from the State Transportation Fund and paid to Turnpike Authority until all of the Authority's debt service has been paid. From this amount 3 % apportioned to the State General Fund. This fund also receives certain motor-vehicle revenues.
County Highway Funds	27 %	Construction and maintenance of county and township roads and streets, debt service for county highway bonds, and 1/3 of 1 % to State General Fund for auditing county books.	Distributed among the counties based on a combination of area, population, and road miles.
County Road Improvement Revolving Fund	3.125 %	For improvement and maintenance of county primary roads.	Maximum of $20 million a year paid to counties based on needs. County road and bridge improvement programs to be coordinated. State DOT administered.
County Bridge Improvement Fund	2.625 %	For improving, repairing and replacing county bridges, and matching Federal-aid funds.	Fund distribution is based on need. State DOT administered.

Incorporated Cities and Towns	1.875 % 13 cents (diesel)	Construction and maintenance of streets and alleys. Distributed as follows:	These funds are distributed to cities and towns in the proportion which the population, as shown by the last Federal census, bears to the total population of all incorporated cities and towns in the State.
Native American Indian Tribes	4.5 %		These funds are deemed to be in lieu of tribal tax revenues that the tribes would have otherwise collected on sales of motor fuels.
State Transportation Fund	$83,333 monthly	Construction, repair, and maintenance of State highways.	
	Remainder	Distributed as follows:	
General Revenue Fund	1.39 %	Collection and administration of tax.	
State Transportation Fund	64.34 %	Construction, repair, and maintenance of State highways.	Tax from 97.5 % of all fuels used on turnpikes is deducted from the State Transportation Fund and paid to Turnpike Authority until all of the Authority's debt service has been paid. From this amount 3 % apportioned to the State General Fund. This fund also receives certain motor-vehicle revenues.
County Highway Funds	26.58 %	Construction and maintenance of county and township roads and streets, debt service for county highway bonds, and 1/3 of 1 % to State General Fund for auditing county books.	
County Road Improvement Revolving Fund	3.85 %	For improvement and maintenance of county primary roads.	Maximum of $20 million a year paid to counties based on needs. County road and bridge improvement programs to be

			coordinated. State DOT administered.
County Bridge Improvement Fund	3.84 %	For improving, repairing, and replacing county bridges, and matching Federal-aid funds.	Fund distribution is based on need. State DOT administered.
	16 cents (LPG)	Distributed as follows:	
	6 cents	Distributed as follows:	
General Revenue Fund	3 %	General governmental functions of State government.	
State Transportation Fund	72.75 %	Construction, repair, and maintenance of State highways.	Tax from 97.5 % of all fuels used on turnpikes is deducted from the State Transportation Fund and paid to Turnpike Authority until all of the Authority's debt service has been paid. From this amount 3 % apportioned to the State General Fund. This fund also receives certain motor-vehicle revenues.
County Highway Funds	24.25 %	Construction and maintenance of county and township roads and streets, debt service for county highway bonds, and 1/3 of 1 % to State General Fund for auditing county books.	
State Transportation Fund	6 cents	Construction, repair, and maintenance of State highways.	Tax from 97.5 % of all fuels used on turnpikes is deducted from the State Transportation Fund and paid to Turnpike Authority until all of the Authority's debt service has been paid. From this amount 3 % apportioned to the State General Fund. This

			fund also receives certain motor-vehicle revenues.
County Highway Funds	2.5 cents	Construction and maintenance of county and township roads and streets, debt service for county highway bonds, and 1/3 of 1 % to State General Fund for auditing county books.	
County Bridge Improvement Fund	0.5 cent	For improving, repairing, and replacing county bridges, and matching Federal-aid funds.	Maximum of $20 million a year paid to counties based on needs. County road and bridge improvement programs to be coordinated. Administered by State Department of Transportation.
County Road Improvement Revolving Fund	1 cent	For improvement and maintenance of county primary roads.	

C.1.6. Tennessee

NAME OF FUND OR AGENCY	AMOUNT OF PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
Gasoline: 20 Cents	-	-	-
Diesel: 17 Cents	-	-	-
LPG: 14 Cents	-	-	-
Gasohol: 20 Cents	-	-	Same as gasoline.
	-	-	

			Rates shown do not include the additional 1 cent special privilege tax and 0.4 cent environmental assurance fee on all petroleum products, or the local option 1 cent special privilege tax on gasoline that local governments may levy for local transportation funding.
Department of Revenue	Amount required	Refunds of tax.	
Highway Fund	3 cents (gasoline, LPG) 2 cents (diesel)	Construction, maintenance, and administration of State highways.	
	Remainder	Distributed as follows:	17 cents gasoline, 15 cents diesel, and 11 cents LPG.
Wildlife Resources Fund	0.1074 % (gasoline)	Administration of Boating Safety Act of 1965.	
State Sinking Fund Bond Account, State Sinking Fund Board	Amount required	Interest and redemption, all State debt.	Annual inspection fees on volatile substances, annual franchise tax, and 1/2 annual motor-vehicle registration fees also pledged against State debt.
	Remainder	Distributed as follows:	Net of 17 cents gasoline, 14 cents diesel, and 11 cents LPG.
	3 cents (gasoline, diesel, LPG)		
Highway Fund	$3,000,000 (gasoline)	For the use and benefit of certain mass transit projects.	

Highway Fund	Remainder	For accelerating the resurfacing of the State highway system and establishing a 12 year cycle of resurfacing.	Also receives certain motor-vehicle fees.
	3 cents (gasoline), 1 cent (LPG)		
General Fund	See remarks	Collection and administration.	Prior to and from this distribution, from all motor-fuel revenues, 1 % of counties' and municipalities' share is subtracted for distribution to the General Fund.
Counties	66 2/3 %	See below.	
Municipalities	33 1/3 %	See below.	
	Remainder	Distributed as follows:	Net of 11 cents gasoline, 11 cents diesel, and 8 cents LPG.
General Fund	See remarks	Collection and administration.	Prior to and from this distribution, from gasoline and gasohol revenue, 1 % of counties' and municipalities' share and 2 % of Highway Fund share are subtracted for distribution to General Fund.
General Fund	1.62 % (diesel, CNG) 1.58 % (LPG)	Collection and administration.	
Counties	28.6 % (gasoline)	Construction and	Department of Highways may administer

	24.75 % (diesel,CNG) 28.28 % (LPG)	maintenance of county highways. The State Treasurer may withhold any part of funds to pay amounts owed by a county for State Old Age Assistance Fund, fees, Central State Hospital dues, etc. Mass transit limited to 22.22 %. Debt service limited to 50 %.	fund and make expenditures at option of county. County trustee receives 1 % for expenses if funds are administered by county. 1/2 of fund is distributed equally among the counties, 1/4 according to area and 1/4 according to population.
Municipalities	14.3 % (gasoline) 12.38 % (diesel,CNG) 14.14 % (LPG)	Construction, improvement, maintenance, administration, and debt service. Mass transit limited to 22.22 %.	Distributed among municipalities on basis of population.
Highway Fund	57.1 % (gasoline) 61.25 % (diesel,CNG) 56.0 % (LPG)	Construction, maintenance and administration of State highways; and the utility relocation program.	This fund receives the State's share of net 1 cent special petroleum tax revenues, and a portion of certain motor-vehicle revenues.

C.1.7. Texas

NAME OF FUND OR AGENCY	AMOUNT OF PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
Gasoline: 20 Cents	-	-	-
Diesel: 20 Cents	-	-	-
LPG: 15 Cents	-	-	-
Gasohol: 20 Cents	-	-	-

Highway Motor-Fuel Tax Fund, Comptroller of Public Accounts, General Fund	100 % (gasoline, diesel and LPG)	Gross Receipts, after distributors' allowances	Gross receipts of tax are initially placed in this fund and allocations are made from this fund.
Tax Administration Fund	1 % (gasoline, diesel and LPG)	Collection and administration of tax.	Unexpended balance at the end of each fiscal year reverts for apportionment with bulk of tax.
	Amount required	Refunds	
	Unrefunded tax on fuel used in boats	Distributed as follows:	
Available School Fund	25 %	Aid to public schools	
General Fund	75 %	Recreational purposes and enforcement of the Water Safety Act	May be appropriated only to the Parks and Wildlife Department.
General Fund	Other unclaimed refundable tax on fuel used off-highway	State general purposes	
	Remainder	Distributed as follows:	
Available School Fund	25 % (gasoline) 25 % (diesel) 25 % (LPG)	Aid to public schools.	
State Highway Fund	50 % (gasoline) 75 % (diesel) 75 % (LPG)	Construction, maintenance, and administration of State highways; State highway patrol.	This is a common fund receiving motor-fuel, motor-vehicle, motor-carrier and other revenues. Expenditures are made from combined revenues.
	25 % (gasoline)	Distributed as follows:	

County and Road District Highway Fund, Board of County and District Road Indebtedness	$7,300,000	Subject to expenditure by counties for right-of-way, construction and maintenance of lateral roads, farm-to-market roads, and State highways, and related incidental costs and debt service on bonds sold to finance these activities.	Distribution among the counties is as follows: 1/5 on basis of area of each county to total of all counties; 2/5 on basis of rural population according to last preceding Federal Census; 2/5 on basis of lateral road mileage, determined by the ratio of the mileage of the lateral roads in the county to the total mileage of lateral roads in the State as of January 1 of the year of allocation as determined by the State-Federal Highway Planning Survey and SDHPT (Texas Transportation Code 256.002)
State Highway Fund	Remainder	Construction, reconstruction, improvement, and maintenance of farm-to-market roads.	

C.2. Provisions Governing the Disposition of State Motor Vehicle and Motor Carrier Receipts

C.2.1. Alabama

CLASSIFICATION OF FEE 2/	NAME OF FUND OR AGENCY	AMOUNT OR PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
	State Treasurer	5 %	For collection, administration, and cost of tags.	
	County Probate Judges	2.5 %	Collection and administration.	
	County Probate Judges	$1.25 per registration	Collection and administration.	Service fee charged by local officials.
	Department of Public Safety	Additional car, light truck, and motorcycle registration fees	Traffic regulation and enforcement of State traffic and motor vehicle laws.	$10.00 per car; $10.00 per truck under 8001 lbs.; $8.00 per motorcycle. This is an additional tax to the regular license tax or registration fee and is paid to State General Fund for the Department of Public Safety.
		Remainder	Distributed as follows:	

	Municipalities and counties	21 %	Administration, construction, maintenance, and debt service on bonds for highways.	Distributed to municipality where motor vehicle resides or is registered or to county where fee is paid if not registered or residing in an incorporated municipality.
	Counties and municipalities	7 %	Same as above.	Allocation to counties based on motor-vehicle registrations. 10 % of each county's allocation is distributed to municipalities in the county based on population.
	State Public Road and Bridge Fund	72 %	Distributed as follows:	
	Highway Sinking Fund	Amount required	Debt service of bonds issued by the Alabama Highway Finance Corporation or predecessor agency.	
	State Department of Transportation	Remainder	Administration, construction, and maintenance of State highways.	

2	**County Probate Judges**	60 cents per license	Collection and administration.	Applies only in counties where probate judge is compensated by fees. Otherwise, this amount is deposited in the County Public Highway and Traffic Fund.
	County Public Highway and Traffic Fund	90 cents per license	Construction, maintenance, and administration of public roads and bridges.	
	State General Fund	Remainder	Appropriated to Department of Public Safety for State Police.	
4,11	**Motor-Carrier Fund**	All	Distributed as follows:	
	Department of Revenue	Amount required	Collection and administration.	
	Public Service Commission	$50,000	Collection, administration, and regulation of for-hire carriers.	
	State Highway Fund	Remainder	Construction and maintenance of State highways.	

7	**Designated Agent**	$1.50 per certificate of title transaction	Collection and administration.	County probate judges or officials receive additional $1.50 fee.
	Department of Revenue	Remainder	Collection and administration.	
8	**State General Fund**	All	Appropriated to Department of Public Safety for State Police.	
9	**State General Fund**	All	State general purposes.	

C.2.2. Arkansas

CLASSIFICATION OF FEE 2/	NAME OF FUND OR AGENCY	AMOUNT OR PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
1,4,8,9,12.1	**State Apportionment Fund**	All		(See State code §19-6-405; §27-14-401)
2,10,12,13	**State Police Fund**	All	Collection, administration, and support of State Police Department. Administration of motor-vehicle inspection laws.	Includes inspection fee.

7	**Revenue Department Building Expansion Fund**	All	Acquisition, construction, and remodeling of State buildings.	
11	**Constitutional and Fiscal Agencies Fund**	3 %	Collection, administration, and general State government services.	Reduced to 1.5 % if collected by State Highway and Transportation Department.
	State Highway and Transportation Department	97 %	Support of Arkansas Highway Police Division of the State Highway and Transportation Department. Expense of regulating, certifying, and assessing (ad valorem) intrastate and interstate highway carriers.	Increased to 98.5 % if collected by State Highway and Transportation Department.

C.2.3. Mississippi

CLASSIFICATION OF FEE 2/	NAME OF FUND OR AGENCY	AMOUNT OR PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
1,9,12.1	**County Tax Collector**	Commission allowed by law	Collection expenses.	

	Counties and Cities	All additional fees levied by 1992 legislation	Local general purposes, including school districts.	Trucks over 16,000 GVW are exempt from local taxes.
	County Road Funds	All privilege taxes collected by county tax collector and $3,732,403 of the taxes collected by the State Tax Commission.	Debt service on county road and road district obligations; construction and maintenance of roads and bridges in counties.	Taxes collected by county tax collector includes automobiles, most trucks 10,000 lbs. and under, and other vehicle classes. Tax Commission sales include all trucks over 10,000 lbs. and other special classes such as buses, temporary permits, and certain types of trucks under 10,000 lbs.
	State Highway Fund	Remainder	Construction and reconstruction of highways or debt service on certain highway bonds. (See	
Tag Fee	**County Tax Collector**	5 %	Collection expenses.	
	State Highway Fund	$5.00 fee per registration	Construction and reconstruction of highways or debt service on certain highway bonds.	

	County General Fund	See remarks	Transmission of registration and title information to State via county computer system.	50 cents per registration for participating counties.
	State General Fund	Remainder	State general purposes.	Highway patrol receives appropriation from State General Fund.
2	**Highway Safety Patrol**	$7.00 per operator's license; $4.00 per Class D commercial license	Patrol cars, communication equipment, and weapons.	
	State General Fund	Remainder	State general purposes.	Reinstatement fee ($25.00) paid into Highway Patrol Relief and Disability Fund.
11	**Public Service Commission**	All	Collection and administration.	
7	**State Tax Commission**	Appropriation	Maintenance of statewide vehicle registration system.	Legislature authorizes discretionary amount to defray operational costs of commission and automated registration system.
	State General Fund	Remainder	State general purposes.	

13	**State General Fund**	$2.00 per certificate of inspection	State general purposes.	Remainder of inspection fees retained by official inspection stations.

C.2.4. Missouri

CLASSIFICATION OF FEE 2/	NAME OF FUND OR AGENCY	AMOUNT OR PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
1,2,5.2,7,8,9, 10,11,12,13	**State Highways and Transportation Department Fund**	Amount of revenue from fees which were in effect prior to January 1, 1980		
		All additional revenue	Distributed as follows:	A Missouri constitutional amendment effective January 1, 1980, provided that any increase in State license fees and taxes on certain motor vehicles in effect on January 1, 1980, shall be distributed in this manner.
	State Road Fund	75 %		

	Incorporated cities and towns	15 %		
	County-Aid Road Trust Fund	10 %		

C.2.5.Oklahoma

CLASSIFICATION OF FEE 2/	NAME OF FUND OR AGENCY	AMOUNT OR PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
1,2,7	**Motor License Agents**	$2.56 per registration; $2.25 per certificate of title; $2.00 per driver license	Collection expenses.	Additional fees for mailing: $2.00 plates, $1.00 decals, titles.
1	**General Revenue Fund**	$3.00 additional registration fee	State general purposes	
10	**General Revenue Fund**	$400,000	State general purposes	
11	**General Revenue Fund**	$5.00 per oversize and overweight permits	Collection expenses.	

	General Revenue Fund	Remainder of oversize permit fees	State general purposes.	
1,2,4,5.1,7,10,11,12		Remainder	Distributed as follows:	Distribution includes the proceeds from nonhighway taxes, including sales and boating levies.
	School Districts	35.46 %	County schools.	Beginning July 1, 2001, amount increased to 35.91 %.
	General Revenue Fund	45.97 %	State general purposes.	State highway patrol is supported by an appropriation from State General Revenue Fund. Beginning July 1, 2001, amount decreased to 45.29 %.
	State Transportation Fund	0.3 %		Beginning July 1, 2001, amount increased to 0.31 %.
	Counties	7. 09 %	Construction and maintenance of county roads, and debt service on bonds issued for road purposes.	Distributed to counties: 40 % in proportion of county road mileage and 60 % in proportion to population. Beginning July 1, 2001, amount increased to 7.18 %.

	County Road Fund	2.53 %	Matching Federal-aid funds for construction of county roads.	Beginning July 1, 2001, amount increased to 2.56 %.
	County Highway Fund	3.55 %	For county roads.	Distribution determined by State DOT. Beginning July 1, 2001, amount increased to 3.59 %
	County General Funds	0.81 %	County general purposes.	Beginning July 1, 2001, amount increased to 0.82 %.
	Cities and Incorporated Towns	3.04 %	Construction and maintenance of streets. In an emergency, surplus funds may be used for general purposes.	Distributed in proportion of population. Beginning July 1, 2001, amount increased to 3.08 %.
	Oklahoma Law Enforcement Retirement Fund	1.22 %	Pension and retirement fund.	Fund also receives $10.00 registration penalty. Beginning July 1, 2001, amount increased to 1.23 %.
	Wildlife Conservation Fund	0.03 %	Funds are used for fish habitat restoration and in the fish hatchery system for fish production.	75 % paid to habitat restoration and 25 % to fish hatchery system.

13	**Department of Public Safety**	$1.00 per inspection sticker	Distributed as follows:	Represents State share of the $5.00 inspection fee.
	General Revenue Fund	50 cents 50 cents	State general purposes. Distributed as follows:	
	Patrol Vehicle Revolving Fund	$500,000	Purchase of patrol vehicles.	
	Oklahoma Law Enforcement Retirement Fund	Remainder	Pension and Retirement Fund.	

C.2.6. Tennessee

CLASSIFICATION OF FEE 2/	NAME OF FUND OR AGENCY	AMOUNT OR PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
1,9,10	**County Court Clerks**	$2.50 per registration	Collection expenses.	Service fees charged by local officials. In counties with a population over 825,000 service fee is $1.50 per registration.

	Motorcycle Rider Safety Fund	$2.00 per motorcycle registration	Administration and expenses of the Motorcycle Rider Education Program.	
	Police Pay Supplement Fund	$1.00 per registration		
	Motor Vehicle Account	2.5 % additional fee on freight motor carriers	Motor vehicle safety enforcement activities of the Department of Safety.	Referred to as a safety inspection fee.
	Counties and Cities	95 % of mobile home registrations	Local schools and general funds.	
		Remainder	Distributed as follows:	
	State General Fund	2 %	Collection and administration.	
	Highway Fund	98 %	Construction, maintenance, and administration of State highways.	

2	**Police Pay Supplement Fund**	$1.00 per 2-year and 4-year operator's and chauffeur's licenses	Highway patrol pay.	
	Motorcycle Rider Safety Fund	$1.00 fee per motorcycle operator's license	Motorcycle rider safety education.	
	Department of Safety	$2.00 per operator's and chauffeur's license fee	Interstate and Defense Highway Emergency Service Program.	Any surplus used to fund highway patrol longevity pay plan and purchase of highway patrol vehicles.
	State General Fund	Remainder	State general purposes.	Department of Safety is supported by an appropriation from the State General Fund. Also, up to 1,000,000 per year is transferred from prior year revenues, and is earmarked for personal services and employee benefits in the Department of Safety Budget.
5,11	**Highway Fund**	Annual permits for oversize, overweight, and movement of natural resource products	Highway maintenance.	

7	**County Court Clerks**	$3.00 per title	Collection expenses.	Service fees charged by local officials. 50 cents per title to the Tennessee Consolidated Retirement System.
	Division of Motor Vehicles	50 cents per title Additional $5.00 fee per title	Improving the processing and review of titles to reduce odometer fraud. Distributed as follows:	Subject to annual appropriation.
	Division of Motor Vehicles	$1.50 per title	Debt service on State park bonds.	Any excess funds shall be earmarked for the purpose of capital projects in State parks.
	Department of Environment and Conservation	Remainder	Capital renovation and improvement programs for camp sites, marinas, and cabins at State parks.	
	State General Fund	Remainder	Collection and administration.	
8		3 cents and 5 cents per pound overload taxes	Distributed as follows:	

	Highway Fund	80 %		
	General Fund	20 %	Collection and administrative expenses.	
	General Fund	Oversize and overweight fines and penalties	State general purposes.	
12.1	**Department of Transportation, Department of Public Safety**	All	Administration and enforcement of special permits and zone license provisions.	
13	**Motor Vehicle Account**	All	Distributed as follows:	
	Highway patrol	10 % maximum	Compensation for expenses incurred in enforcement of motor-carrier regulations.	

	Public Service Commission	Remainder	Expenses incurred in inspection, control, and supervision of motor carriers.	

C.2.7. Texas

CLASSIFICATION OF FEE 2/	NAME OF FUND OR AGENCY	AMOUNT OR PROPORTION	OBJECTS OF EXPENDITURE	REMARKS
1	**County Assessor - Collector**	$1.90 per registration	Collection and administration.	Retained by county of collection. Added $1.00 mail fee is retained by county of collection for handling and postage.
	All-Terrain Vehicle Safety Fund	Additional $6.00 fee per registration	Expenses of all-terrain vehicle operator education and certification program.	Registration required only when used or to be used on public property.
	County Road and Bridge Fund	Up to $360,000	Local road construction and maintenance.	100 % of net collections for first $60,000 plus $350 for each mile of county road, not to exceed

				500 miles, maintained by the county according to the latest data available from the TDOT; 50 % of collections made until the additional amount equals the sum of $125,000 for each calendar year.
	County Road and Bridge Fund	See remarks	Local road construction and maintenance.	An amount equal to 5 % of the motor-vehicle sales tax and penalties collected in the preceding year.
	State Highway Fund	Remainder		Also receives additional $15 fee for tow truck license plates.
2,12.1	**General Revenue Fund**	All	State general purposes.	Department of Public Safety receives an appropriation from the General Revenue Fund.

5	**State Motor-Carrier Fund and State Motor Transportation Fund**	Amount required	Collection and administration.	
	State Highway Fund	10 % of transfers		
	Railroad Commission Operating Fund	Remainder	Support of the Railroad Commission.	
7	**County Assessor-Collector**	$5.00 per certificate	Paid to Officer's Salary Fund.	
	General Revenue Fund	$5.00 per certificate	State general purposes.	
	State Highway Fund	$3.00 per certificate		
9,11	**State Highway Fund**	All		(See State code §116-6686; §116-6701a(3))
13	**Motor Vehicle Inspection Fund**	$5.50 per vehicle safety inspection	Administrative expenses and supplemental retirement benefits.	

Appendix D: Summary of State with Previous or Current Variable Rate Gas Tax Structures

Appendix D presents a table that shows 17 states that have employed a variable rate fuel tax structure since 1970. Currently, there are seven states with variable rate motor fuel taxes. These are shaded in grey. Information used in this table was obtain from a Kentucky Transportation Center study, see note 108 for more details.

State	Description	Years	Adjustment Frequency	Fixed & Variable Tax	Based on Fuel Prices	Based on Fuel Sales	Indexed to Inflation	Tax Rate Floor	Tax Rate Ceiling	Rate Change Ceiling
District of Columbia	Gas tax indexed to the CPI.	1982 - 1985	Annually				X		X	
Florida	Fixed tax plus variable tax indexed to the CPI.	1990 - present	Annually	X			X			
Indiana	Gas tax given as 10% of the average retail price.	1981 - 1986	Semiannually		X					
Iowa	Gas tax based on sales of ethanol-blended gasoline	2002 - present	Annually			X				
Kentucky	2 component variable gas tax: (1) Tax of 9% of the average wholesale price of gas; (2) Supplemental tax reflecting decreases in the average wholesale price; has effectively become flat per gallon rate	1986 - present	Quarterly		X			X	X	
	Gas tax rate given as 10% of the average wholesale fuel price.	1980 - 1985	Quarterly		X			X		X
Maine	Gas tax indexed to the CPI.	2003 - present	Annually				X			
Maryland	Gas tax rate given as 10% of the average wholesale fuel price.	1985 - 1987			X					
Massachusetts	Gas tax rate given as 10% of the average wholesale fuel price.	1980 - 2000	Quarterly		X			X		

Michigan	Gas tax indexed to the FHWA's highway maintenance $ construction cost index and sales of taxable fuel.	1982 - 1984	Annually			X	X	X	X	X
Nebraska	Fixed tax plus a 2 component variable rate: (1) Tax rate sufficient to provide revenue to meet the debt service requirements)also adjusted based on average fuel cost); (2) Tax rate sufficient to meet the appropriations made from the Highway Cash Fund by the Legislature.	1980 - present	Annually and Quarterly	X	X					
New Mexico	Gas tax schedule based on average wholesale price of taxable fuel.	1979 - 1985	Annually		X			X	X	X
North Carolina	Fixed tax plus variable tax of 7% of the average wholesale price of gasoline.	1986 - present	Semiannually	X	X			X		
Ohio	Fixed tax plus variable tax indexed to the FHWA's highway maintenance & construction cost index and taxable fuel sales.	1981 - 1993	Annually	X		X	X	X	X	
Rhode Island	Gas tax given as 11% of the average retail price.	1981 - 1996	Quarterly		X			X		
Virginia	Fixed tax plus variable tax of 3% of the gross receipts of oil companies from the sale of gasoline.	1982 - 1986		X		X				
Washington	Gas tax given as 10% of the average retail price of motor vehicle fuel.	1977 - 1985	Semiannually	X	X			X	X	X
Wisconsin	Fixed tax plus variable tax indexed to the CPI for urban consumers.	1998 - present	Annually	X			X			
	Fixed tax plus variable tax indexed to the FHWA's highway maintenance & construction cost index and state fuel sales.	1984 - 1998	Annually	X		X	X			