In order to prepare a 30-year transportation revenue forecast, it is necessary to review historic information as well as relevant future projections. Additionally, this needs to be done on a revenue source by revenue source basis because each revenue source is likely to grow at a different rate. By the same token, a 30-year forecast is highly speculative and one should not read too much specificity into the results. Rather it provides a planning-level sense of how current revenues forecasted into the future will match up with forecasted needs.

The following section provides background, growth trends, and comparisons to other states for each major revenue source used by the Louisiana Department of Transportation and Development. A brief review of the major revenue sources available to local governments is provided. In addition, other existing revenue sources not currently used by Louisiana, but which could be considered for future funding are also included. A discussion of innovative financing techniques is also included in this chapter.

REVENUE FORECASTS

The revenue forecasts have been prepared in two broad categories, highway funding sources and funding for non-highway modes. The highway funding sources include the Louisiana Transportation Trust Fund revenues including federal funds, self-generated funds, other revenue sources and Transportation Infrastructure Model for Economic Development (TIMED) revenues. The funding for non-highway modes includes aviation, transit, rail, ports and waterways, and bicycle and pedestrian, looking at both State and federal funding sources available.

HIGHWAY FUNDING SOURCES

The following is a discussion of the highway funding sources currently used by the DOTD.

Transportation Trust Fund Revenues

The Transportation Trust Fund was established in the State treasury effective January 1, 1990. The Transportation Trust Fund is a permanent fund into which all of the receipts received in each year from all taxes levied on motor fuels, which includes gasoline and special fuels, is deposited. Also, all monies appropriated by the Federal Highway Administration (FHWA) and the Federal Aviation Administration (FAA), either reimbursed or paid directly, are paid directly or deposited in and credited to the Transportation Trust Fund. By other legislative acts, the receipts from automobile license plate registrations and renewals, as well as from State sales taxes on aviation fuels are also deposited into the Trust Fund.

The monies in the Trust Fund are appropriated and dedicated solely and exclusively for the costs associated with construction and maintenance of the roads and bridges of the State and Federal Highway Systems, the Statewide Flood Control Program, ports, airports, transit, State Police for traffic control purposes, and the Parish Transportation Fund. Trust Fund monies are appropriated annually by the Legislature to ports, airports, flood control, State Police, Parish Transportation, and state highway construction. Though transit is an eligible activity for Transportation Trust Fund monies, to date, no funds have been directly appropriated from the Trust Fund for transit. Rather, monies are reserved for transit within the Parish Transportation Fund.

The constitution provides that the state generated tax monies appropriated for ports, Parish Transportation Fund, Statewide Flood-Control Program and State Police shall not exceed twenty percent of the annual state generated tax revenue in the Trust Fund. However, the 20 percent limit is calculated against the full 20 cent per gallon motor fuels tax, even though four cents of the tax is dedicated to the TIMED program and cannot be used for any other purpose. Additionally, the constitution directs that no less that one-cent of the tax on motor fuels and special fuels shall be appropriated each year to the Parish Transportation Fund.

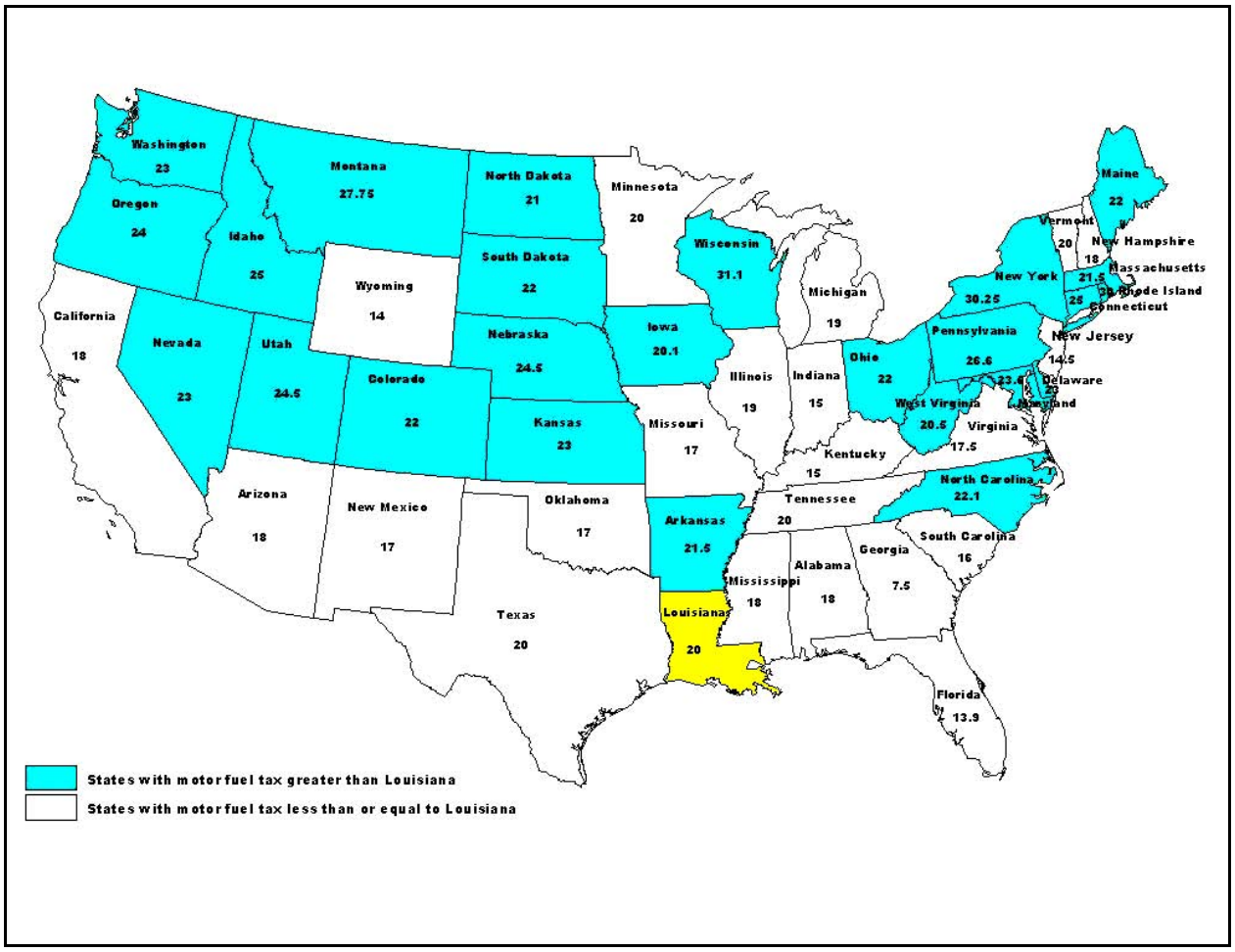
Motor Fuels and Special Fuels

"Motor fuels" is generally the term used for gasoline. Special fuels include diesel and Liquefied Petroleum Gas (LPG). The current tax rate in Louisiana for motor and diesel fuels is 20 cents per gallon (cpg). Four cents of the 20-cent tax is dedicated exclusively to the TIMED Program (discussed in more detail below). The tax rate for LPG is currently 16 cpg.

A state gasoline tax was first established in Louisiana in 1921. The rate was last raised in 1990 when the four-cent tax that is dedicated to the TIMED Program was begun. Prior to that, the rate was increased from 12 cpg to 16 cpg in 1985 in exchange for deleting the 4 percent sales tax on motor fuels.

The motor fuels tax in Louisiana is an excise tax. When Louisiana's excise tax is compared to the motor fuels excise tax for gasoline in other states, Louisiana falls within the middle range. Four other states in the nation have the same motor fuels tax rate for gasoline as Louisiana. Twenty-five states have a motor fuels tax rate that is higher than Louisiana's and 20 states have a rate that is lower. Of Louisiana's border-states only Mississippi has a lower rate. Louisiana has used the states of Alabama, Arkansas, Colorado, Kentucky, Mississippi, Oklahoma, and Tennessee as peer states. Of these states, only Arkansas and Colorado have a motor fuels tax rate for gasoline which is higher than Louisiana's. Tennessee has the same rate. See **Figure 8.1**.

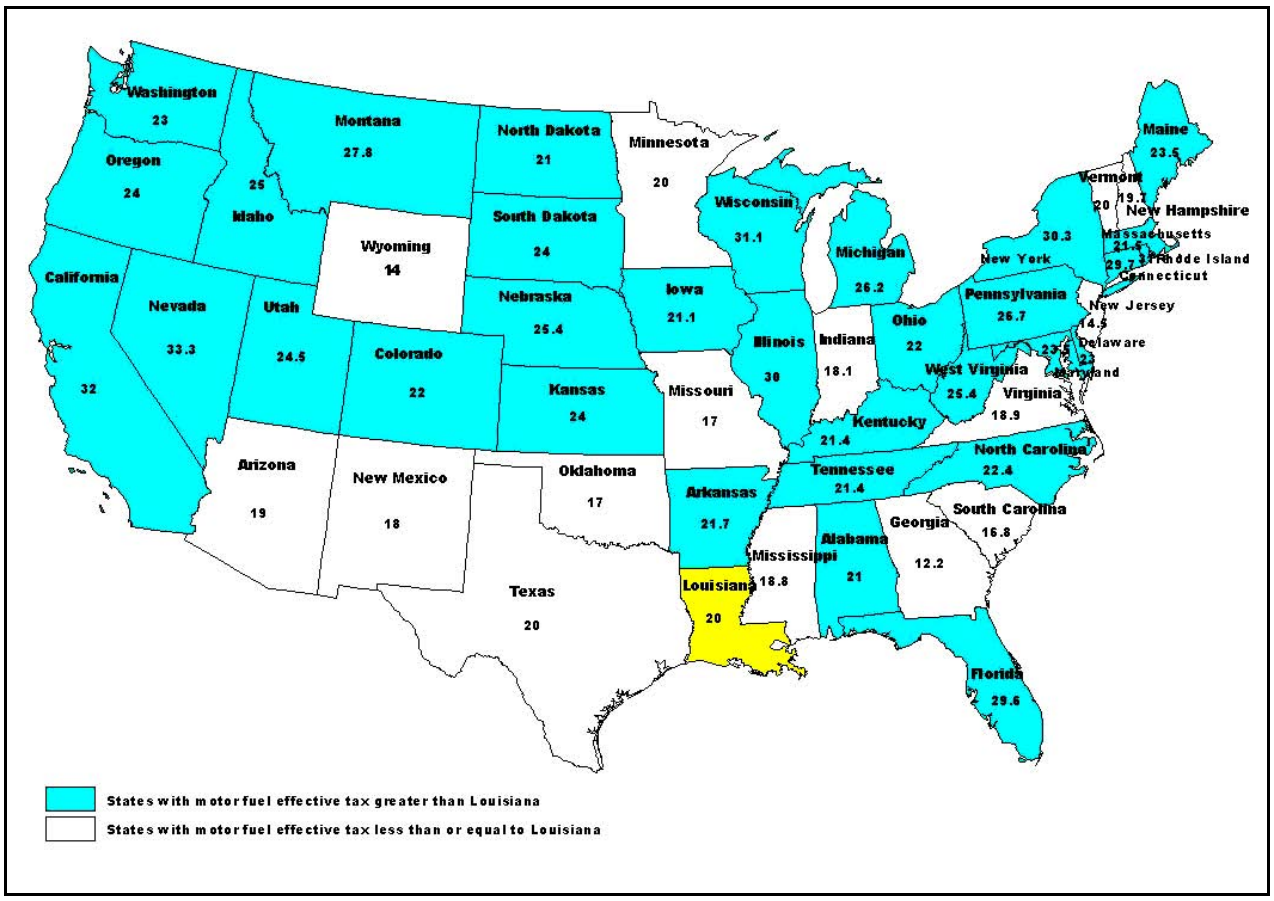
Figure 8.1
Motor Fuels Tax Rates for the United States



Note: Alaska (8cpg) and Hawaii (16cpg) are not shown.
Source: American Petroleum Institute, July 2002.

Some states have additional taxes on motor fuels. These additional taxes include applicable sales taxes, gross receipts taxes, oil inspection fees, underground storage tank fees, other miscellaneous environmental fees, and commercial motor fuel use fees. Adding these fees to the state excise taxes results in a volume-weighted average state tax of 23.6 cpg for gasoline across the nation. When these additional taxes are included in state motor fuels tax rates, three states in the nation have the same rate as Louisiana, 33 states have a higher rate, and 13 states have a lower rate. **Figure 8.2** shows the effective tax rates for motor fuels for the United States.

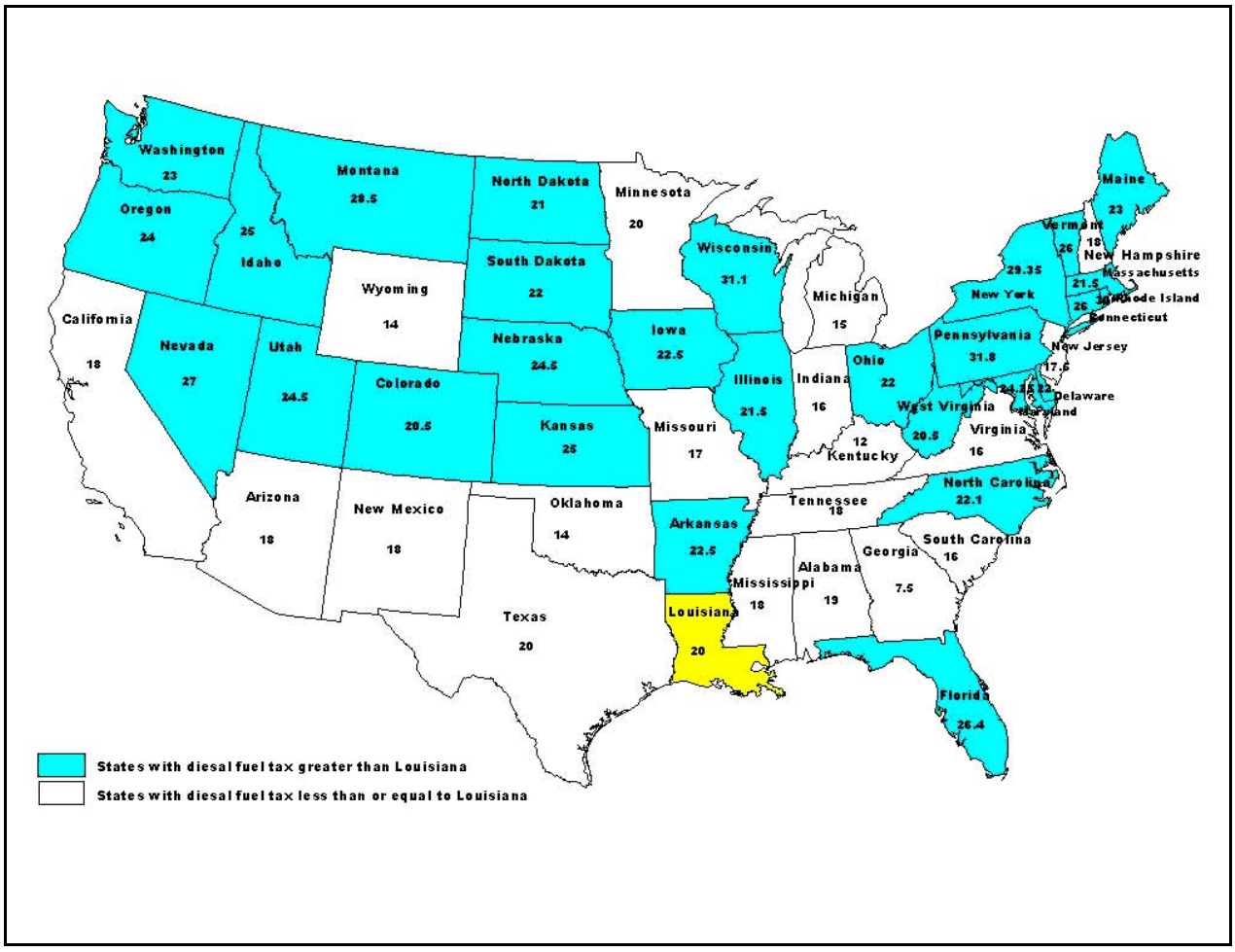
Figure 8.2
Motor Fuels Effective Tax Rates for the United States



Note: Alaska (8cpg) and Hawaii (35.1cpg) are not shown.
Source: American Petroleum Institute, July 2002.

Like motor fuels, the diesel fuels tax is an excise tax. The excise tax on diesel fuel is 20 cpg in Louisiana. Two other states have the same excise tax rate. Twenty-eight states have a diesel fuel excise tax that is higher than Louisiana's, and 19 states have a diesel excise tax rate that is lower. Of Louisiana's border-states, only Arkansas has a higher rate at 22.5 cpg. Of Louisiana's peer states of Alabama, Arkansas, Colorado, Kentucky, Mississippi, Oklahoma, and Tennessee; only Arkansas and Colorado have a higher excise tax rate for diesel fuel than does Louisiana. **Figure 8.3** shows the diesel tax rates for the United States.

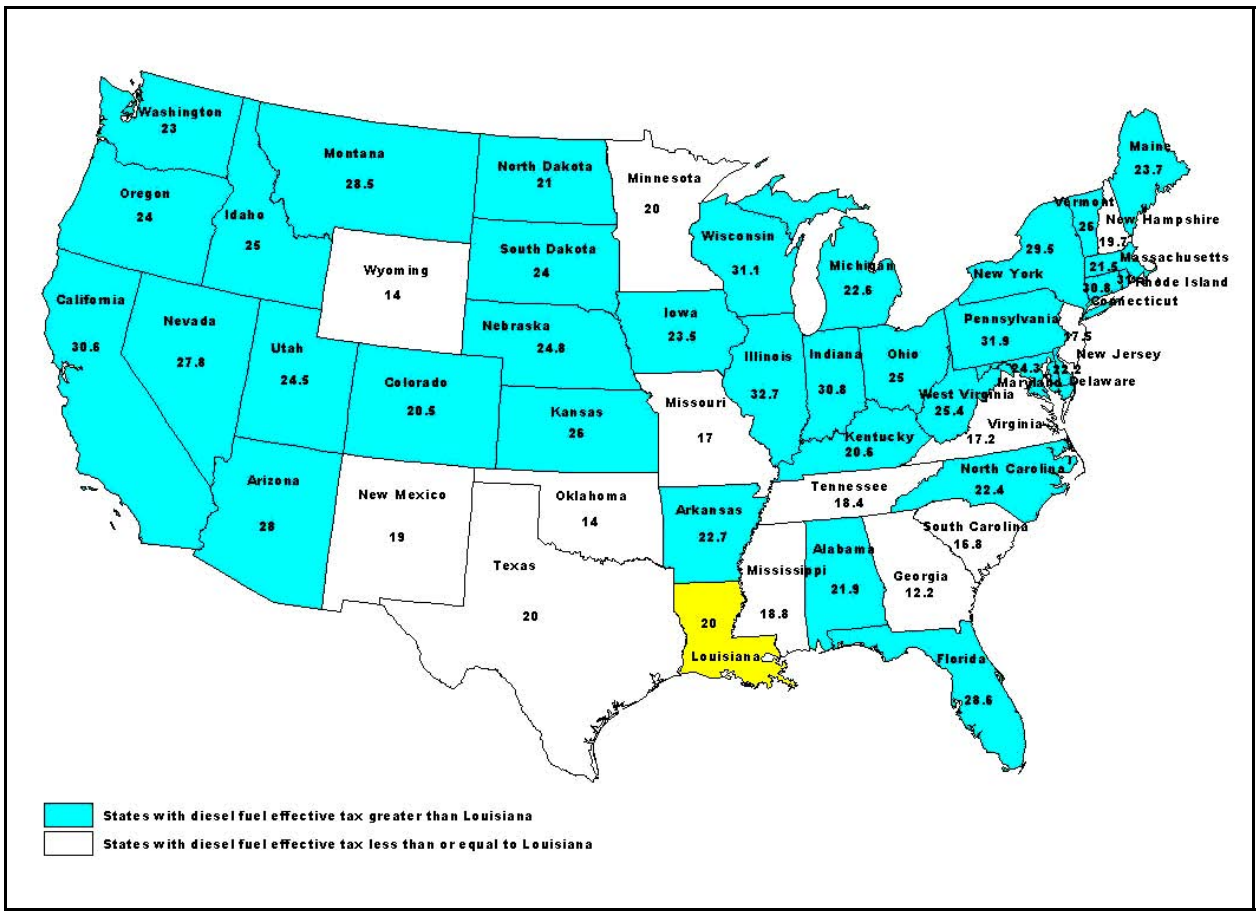
Figure 8.3
Diesel Tax Rates for the United States



Note: Alaska (8cpg) and Hawaii (16cpg) are not shown.
Source: American Petroleum Institute, July 2002.

Like motor fuels, some states have additional taxes on diesel. These additional taxes include applicable sales taxes, gross receipts taxes, oil inspection fees, underground storage tank fees, other miscellaneous environmental fees, and commercial motor fuel use fees. Adding these fees to the state excise taxes results in a volume-weighted average state tax of 23.6 cpg for diesel, the same average as for gasoline. When these additional taxes are included in state diesel tax rates, two states in the nation have the same rate as Louisiana, 35 states have a higher rate, and 12 states have a lower rate. **Figure 8.4** shows the effective tax rate for the diesel tax in the United States.

Figure 8.4
Diesel Tax Effective Rates for the United States



Note: Alaska (8cpg) and Hawaii (35.2cpg) are not shown.
Source: American Petroleum Institute, July 2002.

In order to forecast the future revenue from the motor fuels and special fuels tax, a number of factors such as the historic growth rate of the tax, population and employment forecasts, energy consumption, and travel forecasts can be considered. Louisiana's average annual growth rate for revenues collected from taxes on gasoline and special fuels is 2.14 percent (**Table 8.1**). What must also be considered is how likely it is that the future growth rate will mirror the historic growth rate. In order to determine the reasonableness of using the historic growth rate to determine the future growth rate, it is important to look at future forecasts where available. Motor fuels tax-revenue collections will be affected by factors such as population, employment, economic growth, energy consumption, and fuel efficiency. It is difficult to find projections, for these factors out to 2032, but projections for a shorter horizon are available.

In a demographic analysis provided by Woods and Poole, the population of the United States is projected to grow at a rate of 1 percent per year through 2025. The State of Louisiana is projected to grow slower than the rate for the United States, at approximately 0.6 percent per year through 2025. Historically, the population of the United States grew at an average rate of 1.3 percent from 1970 to 2001. During the same period, the population in Louisiana grew at an

average rate of 0.7 percent per year. These historic rates for population growth are consistent with the growth rates estimated for the next 30 years.

Table 8.1
Louisiana Historical Growth Rates for Revenues Collected from Taxes on Gasoline and Special Fuels[1]

91 to 92	1.62%
92 to 93	4.65%
93 to 94	(0.99%)
94 to 95	4.58%
95 to 96	2.74%
96 to 97	(1.49%)
97 to 98	7.39%
98 to 99	1.01%
99 to 00	2.48%
00 to 01	(2.02%)

According to Woods and Poole, employment for the United States is projected to grow at a rate of approximately 1.2 percent per year through 2025 and Louisiana is projected to grow at relatively the same rate. Historical employment data for the United States showed that from 1970 to 2001 employment grew at an average rate of 2.7 percent per year. Louisiana grew at an average rate of 2.3 percent per year during the same time period. This indicates that employment rates are projected to be slower for the next 25-year period than they were for the last 30-year period.

The Independent Petroleum Association of America (IPAA), in the report of their Supply and Demand Committee, projects that domestic economic activity, as measured by real (inflation-adjusted) Gross Domestic Product, is expected to grow by 3.0 percent. They project inflation to average 1.9 percent annually between 2000 and 2015. Energy consumption is projected to average 1.4 percent for the period of 2000 to 2015. US petroleum demand is projected to grow 1.8 percent annually between 2000 and 2005, by 1.3 percent from 2005 to 2010, and by 1.4 percent from 2010 to 2015. The IPAA also notes that growth in population and in travel per capita is expected to increase gasoline consumption which comprises over half of total transportation energy demand.

Vehicle fuel efficiency also affects revenue collections from motor fuel taxes. In the wake of the 1973 oil crisis, the US Congress passed the Energy Policy and Conservation Act of 1975. The act established the Corporate Average Fuel Economy (CAFÉ) program, which required automobile manufacturers to increase the sales-weighted average fuel economy of the passenger car and light-duty truck fleets sold in the United States. Average passenger car fuel efficiency rose from 18 miles per gallon (mpg) in 1978 to 27.5 mpg in 1985. The standards are currently set at 27.5 mpg for passenger cars and 20.7 mpg for light trucks. In 1996 provisions were added to the Department of Transportation's annual appropriations bill prohibiting the agency from changing or even studying CAFÉ standards. There are currently proposals in Congress to raise the

[1] *Source:* DOTD Budget Office.

standards to 38.3 for passenger cars and 32.0 for light trucks by 2013. However, even without congressional action, fuel efficiency is likely to improve due to technology innovations.

Taking all of the above data into consideration, it was determined that the historic growth rate of 2.8 percent should be tempered a bit for future projections. To be conservative, an annual growth rate of 2.0 percent was used. **Table 8.2** shows the revenue estimates out to 2032 for a one-cent motor fuels tax.

Table 8.2
30-Year Revenue Projection for 1 cent tax on Motor Fuels and Special Fuels
(In Millions of Dollars)

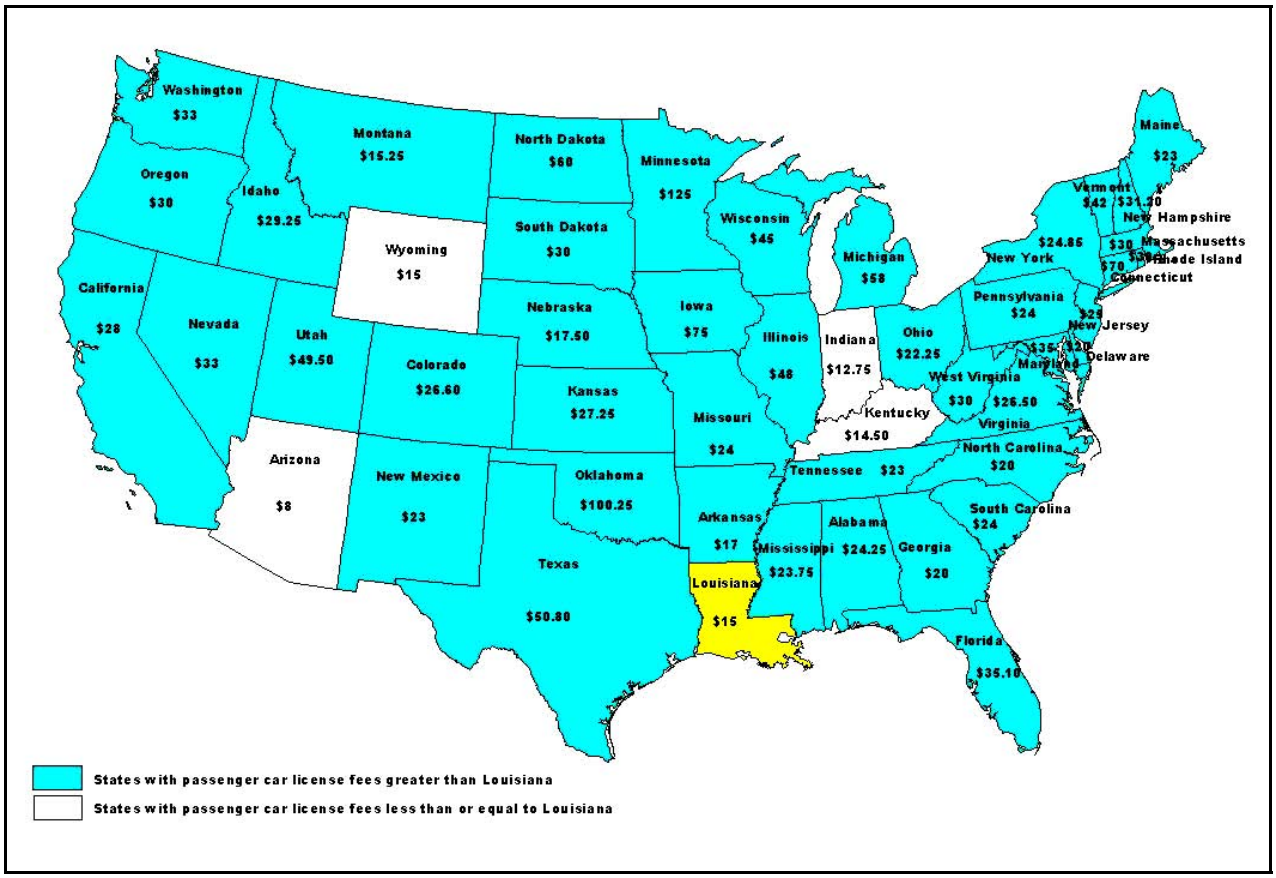
Revenue Source	FY 2002 Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
1 Cent Motor Fuels Tax	$27.5	$30.4	$33.5	$37.0	$40.9	$45.1	$49.8	$1,137.9

Passenger Car License Plate Registration

Passenger car (this category includes pick up trucks, vans, and SUVs) owners in Louisiana pay a registration fee on their automobiles and that fee is deposited into the Transportation Trust Fund. Passenger car license plate registration rates in Louisiana are based on the value of the vehicle. In some states, the rate is based on vehicle weight. The current registration rates in Louisiana range from $10 per year to $41 per year. The rate is $10 per year for a vehicle valued at $10,000 or less. The rate is $10 plus an additional $1 for each $1,000 in value above $10,000. There is also a heavy vehicle license fee in Louisiana for commercial vehicles, but that fee is not deposited into the Transportation Trust Fund.

In order to compare registration rates in different states, the Federal Highway Administration has defined a "typical" vehicle. The fee for the typical vehicle in Louisiana is $15. **Figure 8.5** shows the passenger car license plate registration rate for a "typical" vehicle for all of the states. Louisiana has one of the lowest passenger car license fees in the United States. Wyoming has the same rate as Louisiana and Indiana, Kentucky, and Arizona have a lower rate. All other states have a higher passenger car license fee than does Louisiana.

Figure 8.5
Passenger Car License Plate Registration for the United States



Note: Alaska ($68) and Hawaii ($88.70) not shown.
A 1992 4-door sedan of 3,111 pounds empty weight was selected as the "typical" passenger car.
Source: Federal Highway Administration, January 2001

Car ownership in the United States grew rapidly in the 1960s and the 1970s creating a situation where, by the early 1970s, there were more registered vehicles than licensed-drivers in the United States. This is a relationship that continues today. The ratio of registered vehicles to licensed drivers in the United States in 2000 was 1.43. This is to say that there are 1.43 registered vehicles per licensed driver. The same relationship holds true in Louisiana where there were 1.40 registered vehicles per licensed driver in 2000 (FHWA *Highway Statistics 2000*). Consequently, most of the growth that can take place due to households owning more vehicles has already taken place. Any additional growth in revenues due to license plate registration will likely come from population growth which increases vehicle ownership or from changes in the mix of vehicles registered changing the tax rate per vehicle.

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Between FY 1992 and FY 2001 passenger car registration collections in the Louisiana Transportation Trust Fund grew an average rate of six percent per year. Over the past five years, car registration collections in Louisiana grew by an average rate of 2.3 percent per year. However, during this same five-year time period, the number of registered vehicles in Louisiana grew at a low average rate of 0.6 percent per year and population in Louisiana grew by a modest

0.4 percent per year. The ratio of motor vehicles registered in Louisiana to population remained constant at approximately 0.43 for the five-year period.

It would be unrealistic to assume that revenue collections will grow by six percent per year for a 30- year period. Comparing the last five years of revenue collections with the growth anticipated for population in Louisiana, it is assumed that revenue collections from passenger car license fees will grow by 1.5 percent per year. **Table 8.3** shows the revenue estimate for license plate registration through the year 2032.

Table 8.3
30-Year Revenue Projection for License Plate Registration
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
License Plate Registration	$33.3	$35.9	$38.6	$41.6	$44.9	$48.3	$52.1	$1,268.8

Comparison of User Fees in the United States

A national comparison of taxes and fees paid by automobile users was prepared by Wilbur Smith Associates. Louisiana ranks 46th in the nation in fees and taxes paid by automobile users. This ranking has declined from 1990, when Louisiana ranked 36th in the nation.

Table 8.4 compares all state and local taxes and fees paid by automobile users. These taxes and fees include property taxes, license plate registration, and motor fuels taxes.

Table 8.4
Total Taxes and Fees for Mid-Sized Automobile

State	Auto Fee By Year		Rank	
	1990	2000	1990	2000
Alabama	$151.80	$259.56	17	30
Alaska	$90.00	$104.94	50	50
Arizona	$126.90	$426.67	34	18
Arkansas	$127.57	$396.85	33	21
California	$232.00	$530.41	3	12
Colorado	$149.50	$411.45	18	19
Connecticut	$261.76	$895.83	4	2
Delaware	$112.00	$143.33	41	44
Florida	$141.00	$199.14	24	35
Georgia	$131.00	$468.78	30	15
Hawaii	$105.00	$122.91	45	49
Idaho	$148.00	$205.75	20	32
Illinois	$190.00	$274.88	6	29
Indiana	$106.75	$326.60	44	25
Iowa	$105.00	$331.20	45	24
Kansas	$167.00	$719.46	11	6
Kentucky	$100.70	$315.22	47	26
Louisiana	$117.50	$131.70	36	46
Maine	$147.00	$692.75	21	8
Maryland	$129.00	$165.69	32	39
Massachusetts	$149.00	$703.66	19	7
Michigan	$159.00	$241.17	14	31
Minnesota	$115.00	$375.20	38	22
Mississippi	$157.15	$777.57	15	5
Missouri	$120.00	$433.57	35	16
Montana	$279.72	$479.54	2	14
Nebraska	$141.60	$410.77	23	20
Nevada	$180.31	$510.69	7	13
New Hampshire	$145.60	$535.52	22	11
New Jersey	$94.00	$144.30	48	43
New Mexico	$113.50	$127.64	39	47
New York	$169.60	$202.39	9	33
North Carolina	$112.50	$315.15	40	27
North Dakota	$132.00	$175.91	28	38
Ohio	$130.25	$152.62	31	40
Oklahoma	$94.00	$369.07	48	23
Oregon	$111.00	$138.04	42	45
Pennsylvania	$139.60	$180.49	25	36
Rhode Island	$299.56	$1,803.97	1	1
South Carolina	$156.00	$825.36	16	4
South Dakota	$117.40	$150.62	37	41
Tennessee	$107.10	$127.29	43	48

Table 8.4 Cont.
Total Taxes and Fees for Mid-Sized Automobile

State	Auto Fee By Year		Rank	
	1990	2000	1990	2000
Texas	$133.30	$178.50	26	37
Utah	$177.50	$300.90	8	28
Vermont	$133.00	$147.20	27	42
Virginia	$163.10	$837.93	12	3
Washington	$216.00	$612.08	5	9
West Virginia	$167.20	$546.16	10	10
Wisconsin	$160.20	$201.65	13	34
Wyoming	$131.03	$429.06	29	17
Average	**$147.49**	**$391.14**		

Sales Tax on Aviation Fuels

When the Transportation Trust Fund was created in 1990, it included a four-percent sales tax on aviation fuels. The funds are collected and deposited in the Transportation Trust Fund, but per the constitution, the funds can only be used for aviation. Because the aviation sales tax is collected by the state with the rest of the sales tax, there is no way to know precisely how much of the sales tax collection is attributable to aviation fuels. Since 1992, the Louisiana Department of Revenue has estimated the sales tax attributable to the four percent sales tax on aviation fuels to be $5 million. The $5 million is used to cover the administrative costs of the Aviation Division, provides funds for the Civil Air Patrol and provides funds for designated Capital Improvements at airports.

Future revenue collections for the sales tax on aviation fuels will be influenced by the growth or decline of general aviation and the cost of aviation fuels. General aviation activity in Louisiana is expected to grow, but not at a very robust rate. Based aircraft are projected to grow by 1.17 percent annually and general aviation operations are projected to grow by 1.1 percent annually.

It is difficult to predict the cost of aviation fuels. However, the long term view from WRTG Economics, a provider of data, analysis, planning, and forecasting to the energy and petrochemical industries, is that when controlled for inflation, crude oil prices will remain relatively constant. (WRTG Energy Economics Newsletter, Oil Price Analysis).

Based on the above information, a modest growth rate of one percent per year for the collection of the four percent sales tax on aviation fuels was used. **Table 8.5** shows the 30-year revenue projection for the aviation sales tax.

Table 8.5
30-Year Revenue Projection for Aviation Sales Tax
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
4% Aviation Fuels Sales Tax	$5.0	$5.3	$5.5	$5.8	$6.1	$6.4	$6.7	$175.7

Statewide Flood Control, Ports, State Police, and the Parish Transportation Fund.

There are several programs that do not provide revenue into the Transportation Trust Fund, but instead draw money from the Transportation Trust Fund for other programs. In order to estimate the ***available*** funds in the Transportation Trust Fund, it is first necessary to estimate how many dollars will be deducted from the fund to support these programs.

For purposes of this revenue estimate, it is assumed that statewide flood control, ports, State Police, and the Parish Transportation Fund will grow at the same rate as the overall rate by which all of the revenue sources are projected to grow. That average annual growth rate is about two percent. **Table 8.6** shows the 30-year projections for these programs.

Table 8.6
30-Year Projection for Other Programs
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Parish Transportation Fund	$40.0	$44.1	$48.5	$53.5	$58.9	$64.9	$71.6	$1,643.4
Statewide Flood Control	$10.0	$11.0	$12.1	$13.4	$14.7	$16.2	$17.9	$410.9
State Police	$40.0	$44.1	$48.5	$53.5	$58.9	$64.9	$71.6	$1,643.4
Ports	$25.0	$27.5	$30.3	$33.4	$36.8	$40.6	$44.7	$1,027.1
Total	$115.0	$126.7	$139.6	$153.8	$169.5	$186.7	$205.8	$4,724.9

Federal Funds

In addition to the state tax dollars which are used to fund the construction and repair of highways, Louisiana also receives federal funds to support highway construction and reconstruction. The Federal-Aid Highway Program is known as a federally-supported, but state-selected program because within the broad guidelines of the federal funding categories, states are free to select the projects that they fund with the federal dollars. There are a few exceptions, the most notable being federally earmarked projects. These are projects designated by Congress and typically the funds made available can only be used for a specifically designated project.

Federal highway funds are designated in multi-year bills. The funds are apportioned to states in categories and each category has its own funding formula. The multi-year bill provides the amount of "apportioned" funds, by category, by year, that each state will receive. However, on an annual basis Congress sets what is called an "obligation limitation." The obligation limitation is usually couched in a percentage and it limits the total amount of apportionment that a state may expend in that year. Consequently, in any given year, no state is able to spend 100 percent of their apportioned funds.

An analysis of the federally apportioned funds received by the State since 1970 shows that federally apportioned funds to Louisiana for highways have grown an average of 8.85 percent per year over the 30-year period. An analysis of the last 10 years of congressionally set obligation

limitations shows that it has averaged 90.45 percent. This is to say that on average, Louisiana has only been able to spend 90.45 percent of their apportioned federal funds. In order to estimate the federal highway funds that will be available to Louisiana it is important to take into consideration the obligation limitation.

It is unreasonable to assume that federal fund apportionments will grow at nearly 9 percent a year for 30 years. Even major transportation interests groups that are advocating for additional federal funds through the next reauthorization act, are looking at increases of three to four percent. Consequently, it is assumed that federal fund apportionments will grow an average of three percent per year, but that the obligation limitation will average 90.5 percent, reducing the funds available to spend each year by 9.5 percent. **Table 8.7** shows the 30-year revenue projections for federal funds.

Table 8.7
30-Year Revenue Projection for Federal Highway Funds
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Federal Apportionments	$448.5	$519.9	$602.7	$698.7	$810.0	$939.1	$1,088.6	$21,977.7
With Obligation Limitation of 90.5%	$405.9	$470.5	$545.5	$632.4	$733.1	$849.8	$985.2	$19,889.8

In addition to apportioned funds, states have also been receiving earmarked, or demonstration project funds, since 1982. Earmarked funds are projects specifically named by Congress and the funds earmarked can only be used on the designated project. The practice of earmarking funds began in 1982 and has grown enormously since that time. Since FY 1992, Louisiana has averaged $20.9 million per year in earmarked funds. However in the last five years, the State received an average of $27.7 million per year. Consequently, it has become a significant source of funding and it is a source of funding that is likely to continue into the future. Because the funds are earmarked by Congress for specific projects, it is difficult to predict the basis for how the funds will grow.

For purposes of this estimate, it is assumed that earmarked funds for the Louisiana will grow at about the same rate as federal funds overall. An assumed growth rate of 3 percent was used to estimate earmarked funds. **Table 8.8** shows the 30-year revenue projection for federal earmarked funds.

Table 8.8
30-Year Revenue Projection for Federal Earmarked Funds
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Federal Earmarked Funds	$33.6	$39.0	$45.2	$52.3	$60.7	$70.4	$81.6	$1,646.5

Summary of Transportation Trust Fund Revenue Sources

Table 8.9 provides the estimate through 2032 for all sources of funds in the Louisiana Transportation Trust Fund.

Table 8.9
Louisiana Transportation Trust Fund
(In Millions of Dollars)

Funding Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
State Revenue Sources								
Motor Fuels	$440.00	$485.80	$536.40	$592.20	$653.80	$721.90	$797.00	$18,207.00
Auto Registration	$33.30	$35.90	$38.60	$41.60	$44.90	$48.30	$52.10	$1,268.80
Aviation	$5.00	$5.30	$5.50	$5.80	$6.10	$6.40	$6.70	$175.70
Subtotal	**$478.30**	**$526.90**	**$580.50**	**$639.60**	**$704.80**	**$776.60**	**$855.80**	**$19,651.40**
Transfers Out of Trust Fund								
Flood Control	($10.00)	($11.00)	($12.10)	($13.40)	($14.70)	($16.20)	($17.90)	($410.90)
Ports	($25.00)	($27.50)	($30.30)	($33.40)	($36.80)	($40.60)	($44.70)	($1,027.10)
State Police	($40.00)	($44.10)	($48.50)	($53.50)	($58.90)	($64.90)	($71.60)	($1,643.40)
Parish Transportation	($40.00)	($44.10)	($48.50)	($53.50)	($58.90)	($64.90)	($71.60)	($1,643.40)
Subtotal	**($115.00)**	**($126.70)**	**($139.60)**	**($153.80)**	**($169.50)**	**($186.70)**	**($205.80)**	**($4,724.90)**
Federal Revenue Sources								
Obligations[1]	$405.90	$470.50	$545.50	$632.40	$733.10	$849.80	$985.20	$19,889.80
Earmarked Funds	$33.60	$39.00	$45.20	$52.30	$60.70	$70.40	$81.60	**$1,646.50**
Subtotal	**$439.50**	**$509.50**	**$590.60**	**$684.70**	**$793.80**	**$920.20**	**$1,066.80**	**$21,536.30**
Grand Total	**$802.80**	**$909.70**	**$1,031.60**	**$1,170.50**	**$1,329.10**	**$1,510.10**	**$1,716.80**	**$36,462.80**

1: Based on estimated apportionments with estimated obligation limitation applied.

Transportation Infrastructure Model for Economic Development

The Transportation Infrastructure Model for Economic Development (TIMED) Plan is financed through a dedicated four-cent tax on motor fuels and special fuels. The program was enacted in 1989 and the revenue increase was effective in 1990. The TIMED Plan includes a specific list of projects for which this funding is available. As the TIMED revenues are motor fuel taxes, it was assumed that they would grow at the same rate of 2 percent per year. **Table 8.10** shows the 30-year revenue estimate for TIMED.

Table 8.10
30-Year Revenue Projection for
Transportation Infrastructure Model for Economic Development (TIMED) Funds
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
TIMED 4-Cent Motor Fuel Tax	$110.0	$121.4	$134.1	$148.0	$163.5	$180.5	$199.2	$4,551.7

Self-Generated Funds

The DOTD also receives revenue from several sources which are termed "Self-Generated Funds." The Self-Generated Funds principally include revenues from permits, fees, and fines collected by the Weight and Standards Section, from ferry tolls, and from miscellaneous sources and for funds generated by the Crescent City Connection which is dedicated for use in debt service and operation of their facilities. Historical data on self-generated fund revenues was used to estimate an average yearly growth rate through year 2032. The historical data indicated that the average yearly growth rate was 3.3 percent per year from 1993 to 2002. Due to some fluctuations in year-to-year revenues, a more conservative average growth rate of 2.5 percent per year was assumed for self-generated funds. **Table 8.11** shows the 30-year forecast for the self-generated funds.

Table 8.11
30-Year Revenue Projection for Self-Generated Funds
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Self-Generated Funds[1]	$37.0	$41.9	$47.4	$53.6	$60.6	$68.6	$77.6	$1,665.0

1: Self-Generated funds include funds generated by Crescent City Connection; dedicated for use in debt service and operation of their facilities, as well as unrestricted funds from permits, fees, and fines collected by Weight and Standards Section, from ferry tolls and from miscellaneous sources.

Other Revenue Sources

Additionally, there are other minor sources of revenue, such as earned interest, reimbursements for damage to state property, etc. For these other, minor sources of revenue, an annual average growth rate of three percent was used. **Table 8.12** shows the 30-year forecast for the other revenue sources.

Table 8.12
30-Year Revenue Projection for Other Revenue Sources
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Other Revenue Sources	$41.5	$48.1	$55.8	$64.7	$75.0	$86.9	$100.7	$2,033.6

Summary of Total Funds Available for Highways

Table 8.13 provides an estimate through 2032 for all sources of funds available for highway spending in Louisiana. In order to determine the total funds available for highway spending, those funds required for operating expenses must be set aside. Operating expenses were 47 percent of total available Transportation Trust Fund revenues (excluding dedicated funds) in Fiscal Year 2002, the Baseline year. An annual compounded growth rate of approximately 2.4 percent was used to create a 30-year forecast of operating expenses.

Table 8.13
All Highway Funding Sources
(In Millions of Dollars)

Funding Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Transportation Trust Fund[1]	$802.8	$909.7	$1,031.6	$1,170.5	$1,329.1	$1,510.1	$1,716.8	$36,462.8
TIMED Funds[2]	$110.0	$121.4	$134.1	$148.0	$163.5	$180.5	$199.2	$4,551.7
Self-Generated Funds[2]	$37.0	$41.9	$47.4	$53.6	$60.6	$68.6	$77.6	$1,665.0
Grand Total	**$949.8**	**$1073.0**	**$1,213.0**	**$1,372.2**	**$1,553.2**	**$1,759.1**	**$1,993.7**	**$42,679.6**
Operating Expenses	($377.3)	($426.3)	($481.9)	($545.1)	($617.0)	($698.8)	($792.0)	($16,954.8)
Dedicated Funds (TIMED + Self-Generated)	($147.0)	($163.3)	($181.50)	($201.6)	($224.1)	($249.1)	($276.8)	($6,216.7)
Other Revenue Sources	$41.5	$48.1	$55.8	$64.7	$75.0	$86.9	$100.7	$2,033.6
Total Available	**$467.0**	**$531.6**	**$605.5**	**$690.1**	**$787.0**	**$898.1**	**$1,025.5**	**$21,541.6**

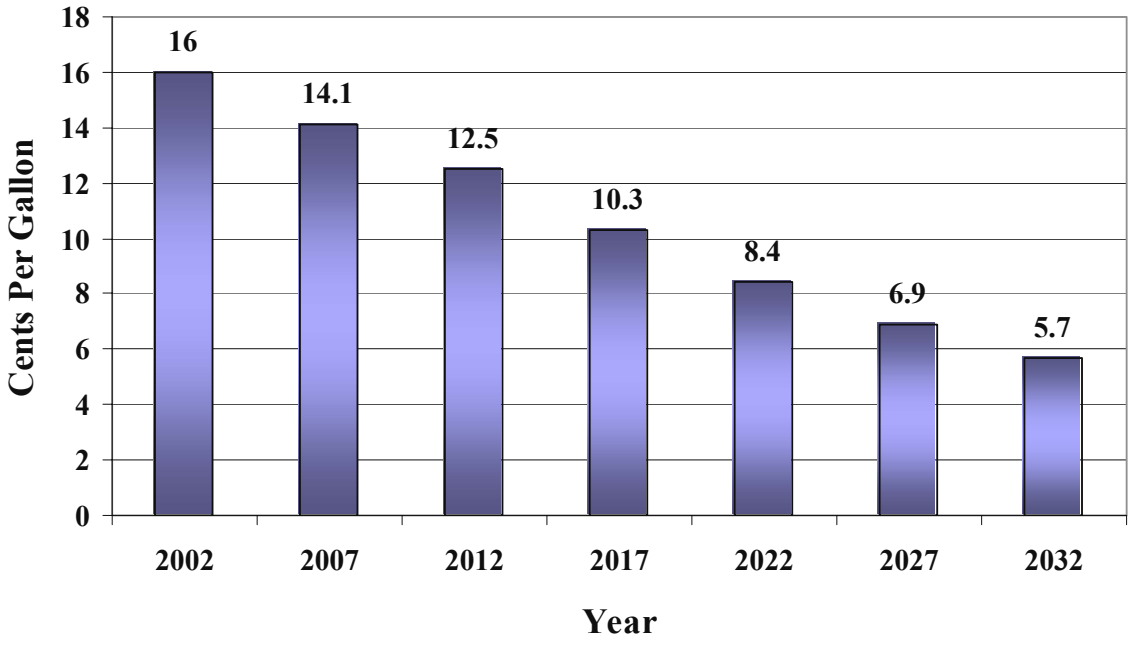
1: For more detailed information see Table 8.9 above.
2: Funds are already committed and not available for a new construction program.

Purchasing Power

When looking at revenues estimated into the future, particularly 30-years into the future, it can appear that a significant amount of revenue will be available. However, it is important to remember that future dollars do not have the same value as dollars today.

Figure 8.6 shows the erosion of the purchasing power of the motor fuels tax due to inflation. Using constant 2002 dollars, over time, the 16 cent motor fuels tax only provides revenue that is equivalent to a 5.7 cent motor fuels tax by 2032.

Figure 8.6
Projected Loss of Purchasing Power With No Revenue Increase

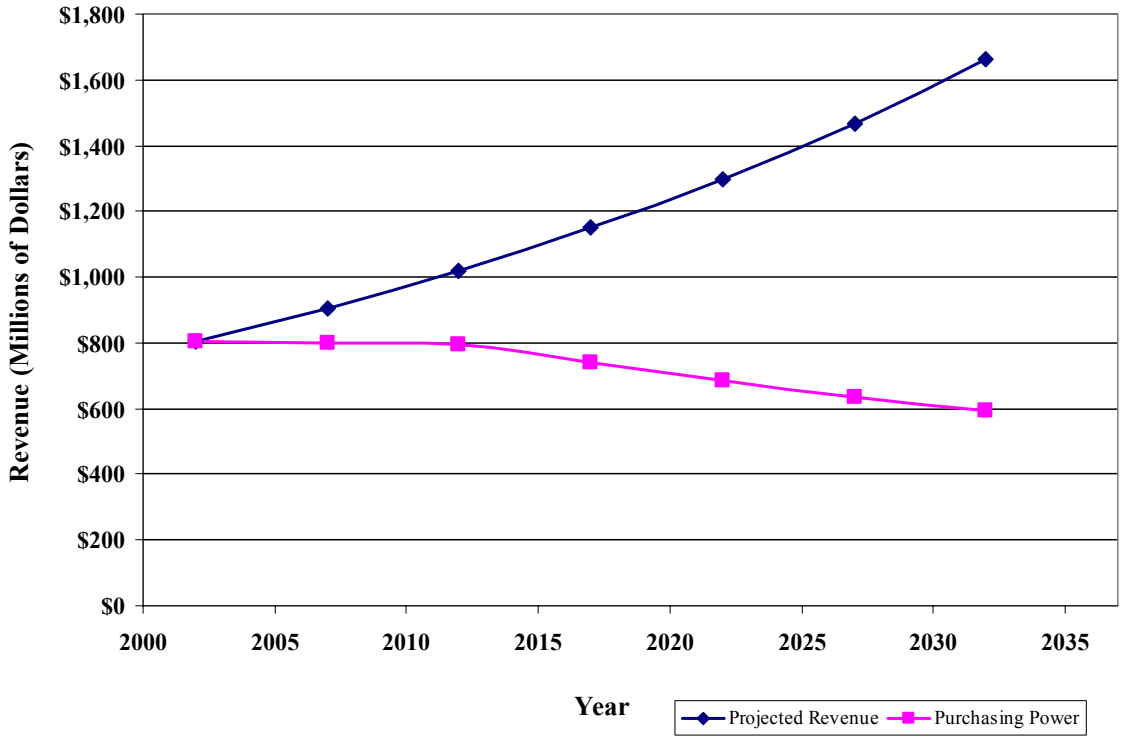


Consequently, it is important to consider the time value of money when considering the sufficiency of the 30-year revenue projections. To do that, the projected loss of purchasing power was analyzed by taking into consideration inflation rates. A review of available inflation rate projections indicated that most projections were for a much shorter period than the 30-year period under consideration in this document. However, a review of inflation rates found that the "Budget of the United States Government for Fiscal Year 2003" projected an inflation rate of 2.3 percent through 2012. The Congressional Budget Office in their "Budget and Economic Outlook, An Update" projected 2.5 percent through 2012. Roger Ibbotson, Professor in the Practice of Finance, Yale School of Management, in a paper entitled "Predictions of the Past and Forecasts for the future: 1976 – 2025 forecasts an inflation rate of 3.1 percent.

Because inflation has been at historic low rates, it is likely that future inflation will increase beyond the low rates currently forecasted. Using this reasoning, an inflation rate of 2.5 percent per year through 2012 was assumed. From 2013 to 2032, an inflation rate of four percent per year was assumed.

The results of the analysis of the loss of purchasing power can be seen in **Figure 8.7**. Even though the 30-year revenue projections for the Transportation Trust Fund grow 108.6 percent from 2003 to 2032, the cumulative purchasing power of the increase and the base year funds declines by 40 percent.

Figure 8.7
Projected Loss of Purchasing Power If No Revenue Increase



Constant Dollars

In order to have a clear understanding of the true worth of the revenue forecasts, the forecasted numbers have been converted back to constant 2002 dollars. **Table 8.14** shows the revenue forecasts for all highway funding sources in constant dollars.

Table 8.14
All Highway Funding Sources
(In Millions of Dollars)

Funding Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Transportation Trust Fund[1]	$802.8	$909.7	$1,031.6	$1,170.5	$1,329.1	$1,510.1	$1,716.8	$36,462.8
TIMED Funds[2]	$110.0	$121.4	$134.1	$148.0	$163.5	$180.5	$199.2	$4,551.7
Self-Generating Funds[2]	$37.0	$41.9	$47.4	$53.6	$60.6	$68.6	$77.6	$1,665.0
Grand Total	**$949.8**	**$1073.0**	**$1,213.0**	**$1,372.2**	**$1,553.2**	**$1,759.1**	**$1,993.7**	**$42,679.6**
Operating Expenses	($377.3)	($426.3)	($481.9)	($545.1)	($617.0)	($698.8)	($792.0)	($16,954.8)
Less Dedicated Funds (TIMED and Self-Generated)	(147.0)	(163.3)	(181.5)	(201.6)	(224.1)	(249.1)	(276.8)	(6,216.7)
Other Revenue Sources	$41.5	$48.1	$55.8	$64.7	$75.0	$86.9	$100.7	$2,033.6
Total Available	**$467.0**	**$531.6**	**$605.5**	**$690.1**	**$787.0**	**$898.1**	**$1,025.5**	**$21,541.6**
Total Available Constant 2002 Dollars	**$467.0**	**$469.8**	**$466.2**	**$442.4**	**$414.7**	**$388.9**	**$364.9**	**$12,961.3**

1: For more detailed information see Table 8.9 above.
2: Funds already committed and not available for a new construction program.

NON-HIGHWAY FUNDING SOURCES

The non-highway transportation modes include aviation, transit, rail, ports, and bicycle and pedestrian. Currently, Louisiana only provides State funding for aviation and ports. The modes of aviation, transit, navigable waterways, and bicycle and pedestrian all receive federal funds.

Aviation

Louisiana provides $5 million per year in State funds for aviation. The funds are used for the administrative costs of the Aviation Division and to provide capital improvements at the State's airports. The airports also receive funding from the Federal Aviation Administration (FAA) from what are called state apportionments and from non-primary funds. Airports in Louisiana receive approximately $5.4 million for state apportionments and approximately $5.8 million for non-primary funds. Commercial service airports also receive funding.

Only state funds for aviation are being estimated since the federal funds flow directly to airports. The growth rate for sales tax on aviation fuel was estimated earlier in this report, under the

Transportation Trust Fund section. In that estimate, a modest growth rate of one percent per year for the collection of the 4 percent sales tax on aviation fuels was used.

Transit

Louisiana does not provide direct State funding for transit. Transit services receive funding from the Federal Transit Administration (FTA). The majority of these are urbanized area formula grants which provide capital and operating assistance to urbanized areas with populations of over 50,000. In Louisiana, Alexandria, Baton Rouge, Houma, Lafayette, Lake Charles, Monroe, New Orleans, Shreveport, and Slidell all receive these funds. New Orleans is also receiving funds for fixed guideway modernization. Louisiana also receives formula grant funds for areas other than the urbanized areas and formula grants for the special needs of elderly individuals and individuals with disabilities.

In total, Louisiana received $27.5 million in transit funds from the FTA in FY 1998. By FY 2003, this figure is projected to grow to $43.1 million. Since FY 1998, transit funding to Louisiana has grown at a rate of approximately 9.4 percent per year.

Because there will be strong, continued pressure for additional transit services, it is projected that federal transit funding will grow by five percent per year. **Table 8.15** shows the 30-year revenue projections for federal transit dollars.

Table 8.15
30-Year Revenue Projection for Federal Transit Funds
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Federal Transit Funds	$40.5	$51.7	$66.0	$84.2	$107.5	$137.1	$175.0	$2,825.3

Ports

The State provides funding for ports through the Ports Construction and Development Priority Program, which was created in 1989. The funding for the program is provided through the Transportation Trust Fund. The program is limited to the construction, improvement, capital facility rehabilitation and expansion of publicly owned port facilities including intermodal facilities and maritime-related industrial park infrastructure developments.

Currently the program is funded at $25 million per year. In order to estimate future funding for this program, it was assumed that funding would increase at the rate of overall growth in State revenue. The growth in the Ports Construction and Development Priority Program is estimated to be about two percent per year through 2032; **Table 8.16** shows the 30-year revenue projections for the Port Priority Program.

Table 8.16
30-Year Revenue Projection for Ports and Waterways Fund
(In Millions of Dollars)

Revenue Source	Baseline	FY 2007	FY 2012	FY 2017	FY 2022	FY 2027	FY 2032	Total Funds 2003-2032
Ports and Waterways Fund	$25.0	$27.5	$30.3	$33.4	$36.8	$40.6	$44.7	$1,027.1

Bicycle and Pedestrian

There are no specific funds set aside for bicycle and pedestrian projects. Bicycle and pedestrian improvements are eligible activities under a number of the federal-aid highway funding categories. Specifically, the Transportation Enhancement Program can be used for bicycle and pedestrian projects. Louisiana receives approximately $10 million per year for the Transportation Enhancement program. It is up to the State's discretion to select projects under this program. The funds for Transportation Enhancements are included in the federal aid highway estimate provided under the Transportation Trust Fund. No further estimates are provided for the mode of bicycle and pedestrian.

LOCAL TRANSPORTATION FUNDING

Local governments in Louisiana have transportation needs just as does the state, but they also have access to revenue sources to help meet those needs. Each parish in Louisiana uses a different mix of revenue sources depending on their own unique situations, making it difficult to discuss local revenues in detail. According to the most recent statistics available (FY 2001) from the Federal Highway Administration, local governments in Louisiana used revenues of $587.2 million for highways. Major revenue sources used by local governments include appropriations from general funds, property taxes and special assessments, bond proceeds, and other local imposts.

A portion of the State motor fuels tax is provided each year to parishes through the Parish Transportation Fund. In accordance with the State constitution, the amount cannot be less than the revenues generated by one cent of the excise tax on fuels.

OTHER FUNDING MECHANISMS

Besides the revenue sources currently being used to fund transportation by Louisiana, there are other sources that could be considered. The following provides an overview of revenue sources used for transportation by other states but not by Louisiana and also discusses other possible revenue sources that could be considered.

The primary funding source for most State DOT's transportation programs are motor fuels taxes and registration fees; taxes that are considered traditional "user" fees. However, there are a number of other revenue sources used by states. Some of these sources are used to support the local road system rather than the state system and some are for specific transportation needs and not for more generalized transportation purposes. However, any of them could be considered by Louisiana and could be shaped to meet the State's specific needs.

Revenue Sources Used for Transportation by Other States

The most common revenue sources used by other states are the sales and use tax, the severance tax, a surcharge on rental cars, general fund appropriations, and bonds. Sixteen states use sales tax receipts to support highway construction. Seven states use severance taxes to support either state or local road construction, four have a surcharge on rental cars, 31 receive some kind of a general fund appropriation and 23 utilize bond proceeds. There are many variations in terms of how the taxes are assessed and many have dedicated purposes, but the following are examples that demonstrate the range of approaches.

Sales Tax

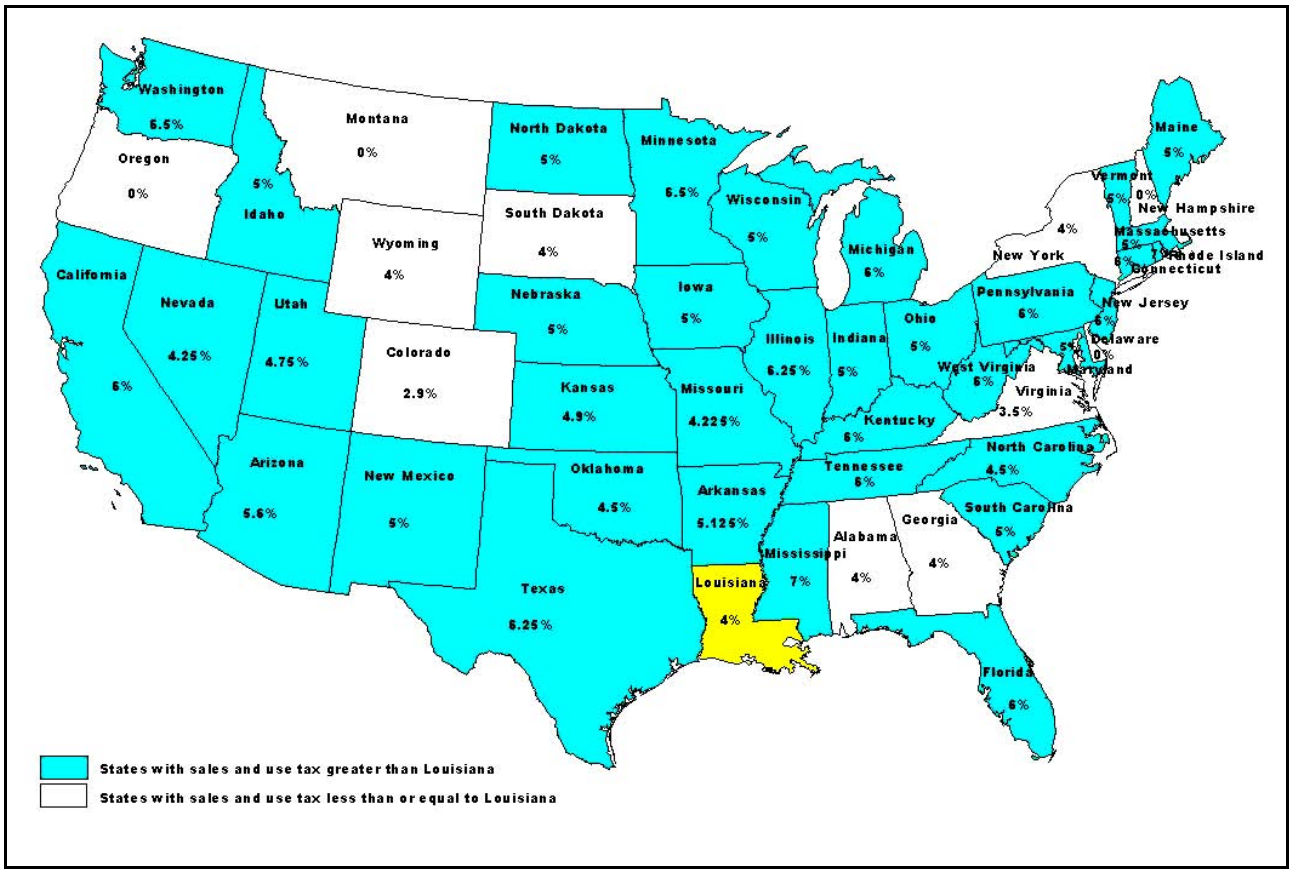
While a number of states use some portion of their sales tax to support transportation projects, Louisiana is not one of those states.

Figure 8.8 shows the state sales and use tax rates for the United States, whether those funds are used for transportation or not. The state sales tax rate in Louisiana is four percent. Six other states also share that same sales and use rate as Louisiana. Thirty-six states have a sales and use tax that is higher than Louisiana, which equates to 72 percent of the nation. Seven have a rate that is lower than Louisiana, which equates to 14 percent of the nation. Of Louisiana's border states, all have a higher sales and use tax rate than Louisiana. The border states tax rates range from 5.1 to seven percent.

The following looks at a few specific examples of states that use sales tax receipts to support transportation. While this isn't a comprehensive accounting of such states, it is illustrative of the variety of ways that states put general sales tax revenue to work for transportation improvements.

- Arizona – If the annual increase in sales tax revenue exceeds seven percent, a portion of the state General Fund share is transferred to the Highway User Revenue Fund.
- Illinois – A percentage, set to equal the amount of the diversions out of the Motor Fuel Tax Fund, of the net sales tax revenue from all taxable items from the state's 6.25 percent sales tax goes to the Motor Fuel Tax Fund. (This transfer was discontinued in April of 2000 after the last of the diversions were discontinued.)
- Iowa – 80 percent of a five percent use tax on new and used motor vehicles is distributed to a list of funds with the remainder being distributed to the Road Use Tax Fund.
- Kansas – The sales tax attributable to the sale of new and used motor vehicles is transferred to the State Highway Fund. The funds are first deposited into the State General Fund and transferred to the State Highway Fund. Also, a sales tax equivalent to 0.25 percent of the state sales tax is deposited directly into the State Highway Fund.
- Michigan – The Comprehensive Transportation Fund receives not less than 6.975 percent of the six percent Sales Tax on Motor Fuel, Motor Vehicles, and Auto Parts.

Figure 8.8
Sales Tax Rates for the United States



Note: Alaska (0%) and Hawaii (4%) are not shown.
Source: Sales Tax Institute, May 2002.

Sales Tax on Motor Fuels

According to the American Petroleum Institute, 10 states authorize a sales tax on motor fuels. States that levy a sales tax on motor fuels include California, Florida, Georgia, Hawaii, Illinois, Indiana, Michigan, New York, Virginia and West Virginia. Some states have other forms of taxation on motor fuels, such as gross receipts taxes and underground storage tank taxes as well.

Excise (Sales) Tax on Other Fuels/Oil

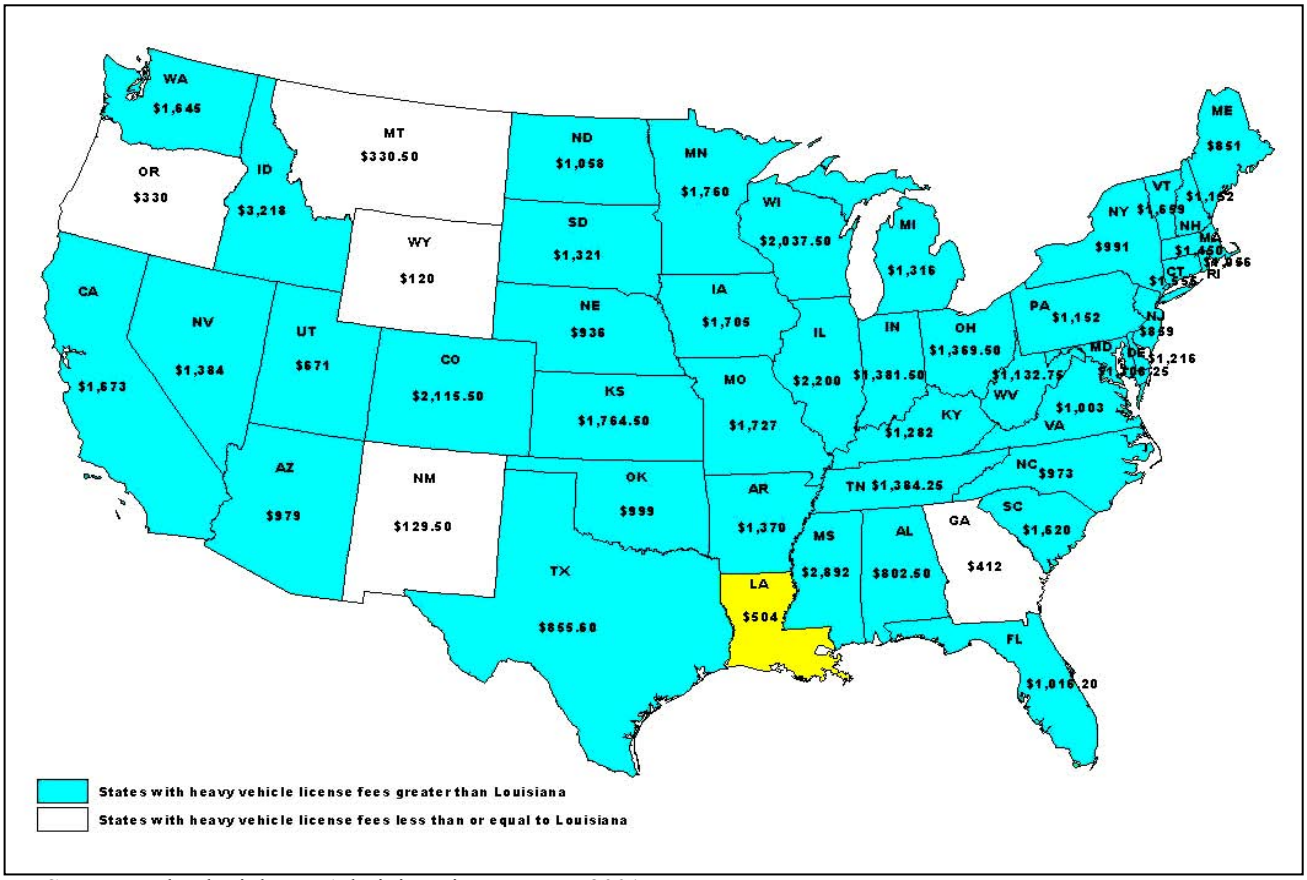
The following looks at some of the states that use excise tax receipts to support transportation.

- Alabama – four cent per gallon excise tax on lubricating oil.
- Mississippi – 5.75 cents per gallon on all other oil, except oil used in aviation.
- North Dakota – two percent excise tax on special fuels used for non-highway purposes.
- Texas – 6.25 percent excise tax on lube oil used in motor vehicles.
- Wyoming – 10 percent of the 4 percent sales tax on propane, butane, liquefied gas, and compressed natural gas.

Heavy Vehicle Registration

Heavy vehicle license fees are taxed at a rate of $504 in Louisiana however, none of the tax money currently goes to the State Transportation Trust Fund, as is common in most other states. Forty-three states have a heavy vehicle license fee that is higher than Louisiana, which equates to 86 percent of the nation. Five have a fee that is lower than Louisiana, which equates to 10 percent of the nation. One state has the same fee as Louisiana. Of Louisiana's border states, all states have a higher heavy vehicle license fee than Louisiana. The border states' fees range from $855.60 to $2,892, which is significantly higher than Louisiana's. **Figure 8-9** shows the heavy vehicle license fees for the United States.

Figure 8.9
Heavy Vehicle License Fees for the United States
(in Dollars)



Source: Federal Highway Administration, January 2001
Note: Alaska ($504) and Hawaii ($869.80) not shown.
A 2001 diesel-powered truck tractor of 14,440 pounds empty weight and a semitrailer of 12,300 pounds empty weight, registered for 80,000 pounds gross combination weight, in private operation, were selected as the "typical vehicles".

Severance Tax

The following looks at some of the states that use severance tax receipts to support transportation.

- Arkansas – 12.5 percent of 97 percent severance tax on natural resources plus 87.5 percent of 97 percent of an additional three cents per ton severance tax on stone and crushed stone (these funds are all dedicated to the County Highway Fund).
- New Mexico – All of the severance tax on natural resources, oil and gas go to paying debt service on severance tax bonds authorized by the Legislature for a variety of projects including some highway projects.
- Tennessee – Coal and mineral severance tax dedicated to counties for county highways and construction, maintenance and repair of county road system.
- Wyoming – All of a one percent severance tax on surface coal and underground coal and 1/3 of the revenues from a two percent severance tax on crude oil, lease condensate and natural gas (these funds are dedicated to the State Highway Fund).

Surcharges on Rental Cars

The following looks at some of the states that use surcharges on rental cars to support transportation.

- Florida – 80 percent of a rental car surcharge of $2.00 per day for the first 30 days is distributed to the State Transportation Fund.
- Hawaii – A rental motor vehicle surcharge tax of $2.00 per day goes to the State Highway Fund.
- Iowa – Five percent sales tax on auto rentals is distributed to the Road Use Tax Fund.
- Utah – 2.5 percent motor vehicle rental tax is distributed to the Corridor Preservation Revolving Loan Fund.

Other

Proceeds from Sale of Pine Grown on State Highway Right of Way:

- Arkansas – 50 percent of the proceeds go to the State Highway and Transportation Department Fund.

Gross Proceeds Tax on Gaming:

- Colorado – Appropriations may be made from the initial 50 percent distribution to the State General Fund and from 50 percent of the unexpended balance in the Limited Gaming Fund to the State Highway Fund.

Tour Vehicle Surcharge:

- Hawaii – $65.00 per month for each tour vehicle over 25 seats. $15 per month for each tour vehicle with eight to 25 seats.

Corporate Income Tax:

- Maryland – 10.714286 percent of net revenues from the seven percent corporate income tax go to the Gasoline and Motor Vehicle Revenue Account and is pledged to the Consolidated Transportation Bonds.

Sales Tax on Contractors:

- Mississippi – Dedicated to the "Four-Lane Highway Program" from proceeds of 3.5 percent tax on contracts for "Construction and Reconstruction of Highways under Four-Lane Highway Program."

Sales Tax on Purchase Price of Mobile Homes:

- South Dakota – 15 percent of the three percent sales tax on the purchase price of mobile homes goes to the Motor Vehicle Fund and 85 percent goes to the County Highway Fund.

Lease Rental of State Highway Right-of-Way and Air Space Rights:

- Texas – 100 percent of the proceeds go to the State Highway Fund.

Excise Tax on Special Fuels used for Non-Highway Purposes:

- North Dakota – Two percent tax applies to retail sales of agricultural, railroad, industrial, and heating fuel which are exempt from other fuel taxes.

Other Vehicle-Related Revenue Options

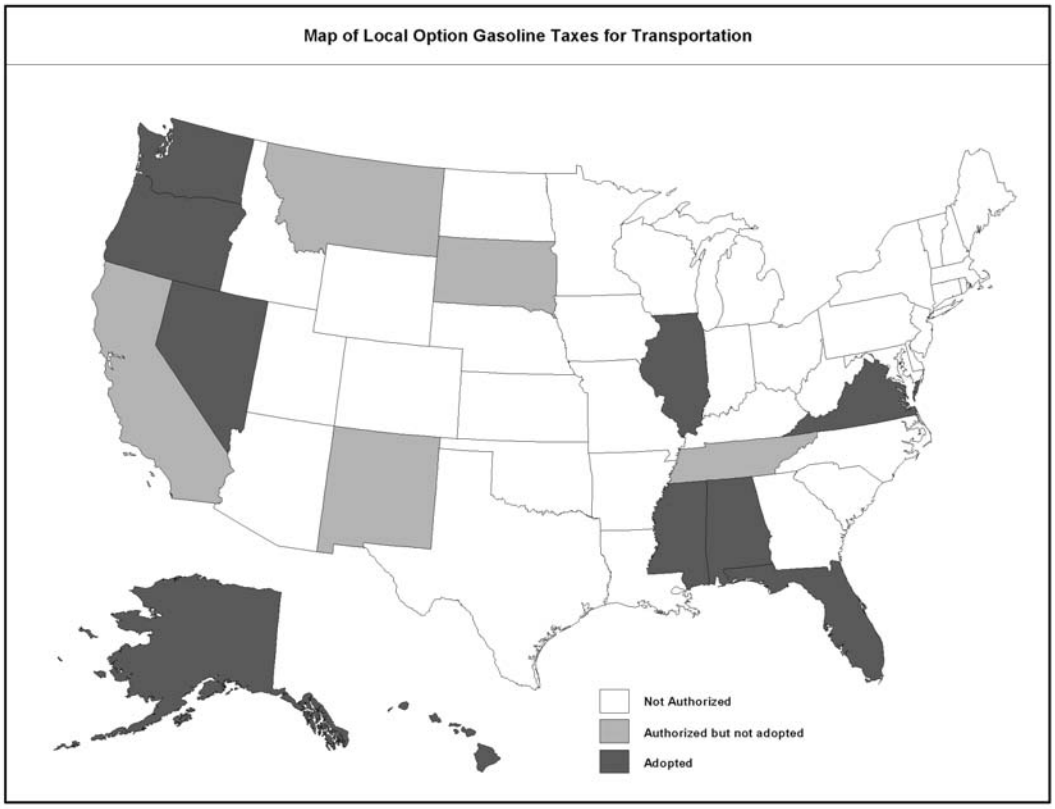
In addition to the approaches described above, there are other options that can be considered. These options include tolls, taxes based on vehicle miles traveled (VMT), and weight distance fees.

- **Tolls** – Tolls are used extensively around the world and in 29 of the 50 states (state and quasi-state toll facilities). Tolls are responsive to inflation and are market driven because the driver is paying to use the facility.
- **Tax on VMT** – There exists ITS technology that can be used to collect a tax on the basis of VMT driven and there is additional research and development underway. However, it will probably still require significant study and education before electronic methods to track VMT and tax on that basis is considered a viable taxing option. It would be an equitable taxing source that is responsive to inflation.
- **Weight distance fees** – Weight distance fees or a ton-mile tax is a tax based on weight and distance traveled. Few states use ton-mile taxes and they are strongly opposed by the trucking industry.

Other Revenue Options

Local Option Motor Fuels Tax – Louisiana has a local option sales tax, but not a local option motor fuels tax. A local option motor fuels tax could be provided, thereby allowing local governments to assume more responsibility for addressing local transportation problems. Fifteen states currently allow a local option motor fuels tax **(Figure 8.10)**, including Alabama, Alaska, California, Florida, Hawaii, Illinois, Mississippi, Montana, Nevada, New Mexico, Oregon, South Dakota, Tennessee, Virginia, and Washington. Out of these, only Alabama, Alaska, Hawaii, Illinois, Mississippi, Nevada, Oregon, Virginia and Washington have actually implemented the tax. Each of these states taxes only gasoline (diesel is exempt), and the rates are typically in the one to six cent per gallon range (Florida allows 11 cents).

Figure 8.10
Local Option Gasoline Taxes in the US



Capital Outlay – The State Legislature used to provide sizable funding for transportation projects through the capital outlay program. Since the inception of the Transportation Trust Fund, very few capital outlay funds are used for transportation projects. Nothing prevents transportation projects from being included in the capital outlay program and this could be an additional source of revenue for transportation.

INNOVATIVE FINANCING TECHNIQUES

Since 1994, the federal government has introduced a number of financing innovations designed to streamline procedures, improve existing programs, and implement new ideas for improving transportation infrastructure. **It is important to note that these are financing techniques, not revenue sources.** Many of these techniques will only be effective if they are also accompanied with changes in the project development process as well. Consequently, these techniques won't work for all states or work in all situations.

Innovative financing techniques fall into four broad categories: grant management strategies, grant application revenue vehicle (GARVEE bonds), credit assistance strategies, and tolling options.

Grant Management Strategies

- **Advance Construction and Partial Advance Construction** – Advance construction and partial conversion of advance construction are cash flow management tools that allow states to begin projects with their own funds and only later convert these projects to Federal assistance. Advance construction allows a state to request and receive approval to construct Federal-aid projects in advance of the apportionment of authorized Federal-aid funds. Under normal circumstances, states "convert" advance-constructed projects to Federal aid at any time sufficient Federal-aid funds and obligation authority are available, and do so all at once. Under partial conversion, a state may obligate funds for advance-constructed projects in stages.
- **Tapered Match** – Tapered match enables the project sponsor to vary the non-Federal share of a Federal-aid project over time, as long as the Federal contribution toward the project does not exceed the Federal-aid limit.
- **Flexible Match** – Flexible match allows a wide variety of public and private contributions to be counted toward the non-Federal match for Federal-aid projects.

Grant Application Revenue Vehicle (GARVEE Bonds)

GARVEE bonds permit states to pay debt service and other bond-related expenses with future Federal-aid highway apportionments. GARVEE bonds are useful for the following types of projects:

- They are 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 (such as local taxes or tolls) and other forms of repayment (such as state appropriations) are not feasible; and
- The sponsors (generally state DOTs) are willing to reserve a portion of future year Federal-aid highway funds to satisfy debt service requirements.

Credit Assistance Strategies

- **Section 129 Loans** – Section 129 loans allow states to use regular Federal-aid highway apportionments to fund loans to projects that have dedicated revenue streams.
- **State Infrastructure Banks** – State Infrastructure Banks (SIBs) are revolving infrastructure investment funds for surface transportation that are established and administered by states. SIBs may be capitalized with regular Federal-aid highway apportionments and state funds and can offer a range of flexible financial assistance, including loans and various forms of credit enhancement.

  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.

  Currently, only states that capitalized a State Infrastructure Bank with Federal funds distributed in Federal fiscal years 1996 or 1997 may continue to operate a SIB with whatever Federal funds have already been deposited in the bank. These states are free also to supplement the initial capitalization with additional state or local funds. Four

states named in TEA-21 (California, Florida, Missouri, and Rhode Island) may continue to use Federal highway and transit funding to further capitalize their banks.

- **TIFIA Program** – TIFIA stands for the Transportation Infrastructure Finance and Innovation Act (TIFIA) program, authorized by TEA-21. TIFIA allows U.S. DOT to provide direct credit assistance, up to 33 percent of eligible project costs, to sponsors of major transportation projects. Credit assistance can take the form of a loan, loan guarantee, or line of credit.

Following is a brief description of the purposes served by the three forms of assistance.

- **Direct Loans** - Direct loans provide flexible long-term financing for a portion of construction costs. Loans must be repaid within 35 years following project completion. The interest rate must be equal to or greater than the yield on U.S. Treasury securities of a comparable maturity. In practice, U.S. DOT has offered the comparable U.S. Treasury rate to all borrowers with no distinction for credit risk.
- **Loan Guarantees** - Loan guarantees are intended to promote private investment in transportation projects by providing a Federal guarantee of debt service payments due to a commercial lender over the life of the loan. The terms of a loan guarantee are similar to those of a direct loan. The interest rate will be negotiated between the borrower and the lender and approved by U.S. DOT.
- **Lines of Credit** - Standby lines of credit represent a US DOT commitment to provide one or more direct loans contingent on shortfalls in revenues during the 10 years following substantial completion of a project. Lines of credit thus provide a secondary source of capital during this so-called ramp-up period when project-based revenues (such as toll receipts) are most likely to fall short of expectations. Up to 20 percent of the line can be converted into a loan in any given year during the 10-year window, and all draws on the line of credit are payable within 35 years of project completion. The interest rate on the line is established upon execution of a term sheet and must equal or exceed the current yield on 30-year Treasury securities.

Tolling Options

Toll provisions allow states to consider a tolling option for certain permitted types of federal-aid projects on the projects' own merits without the penalty of a reduced federal share.

A federal-aid highway project's eligibility for toll finance depends both on the type of facility and the nature of the project. Five categories of projects are eligible for federal funds:

- Initial construction of non-Interstate highways, bridges, and tunnels.
- Resurfacing, restoration, rehabilitation, and reconstruction (4R) of existing toll facilities.
- Reconstruction or replacement of Interstate or non-Interstate bridges and tunnels. The essential feature of this category is the conversion of a free bridge or tunnel to toll finance following the reconstruction or replacement.
- Reconstruction of non-Interstate highways. Again, this category involves the conversion of a free facility to a toll facility. This option exists only for Federal-aid highways that are not on the Interstate system. However, conversion of free Interstate highway segments to tolled facilities is possible through a special pilot program.

- Preliminary studies to determine the feasibility of any of the toll construction activities described above.

Eligible expenditures include debt service, operations and maintenance, establishment of necessary reserve funds, and a reasonable return on private investment for projects that include private participation.

POTENTIAL SOURCES OF NEW REVENUE

The Plan recommendations for Scenarios 2 and 3 assume an infusion of additional revenues for transportation, though the specific sources of the new revenues are not identified. Although the securing of new funding for transportation is clearly an issue to be resolved through an active dialogue between the Governor, legislators, business community and stakeholders, the LIIEP Commission asked that the Plan document identify potential sources that could yield the needed amounts.

The sources of revenue, units, and estimated yield included in the following discussion are illustrative only. They are not endorsed nor recommended by the DOTD, LIIEP Commission, nor any other political subdivision in the State of Louisiana. The information is provided to illustrate some potential sources and estimate what they might yield over a 30-year period.

Yield Target

As discussed in Chapter 9, Scenarios 2 and 3 assume new transportation revenues in Louisiana from state sources. In order to "drive" the program elements identified in the Plan, approximately $250 million in new state revenue is needed in the first year, with a total yield of about $9.7 billion over 30 years. This assumes a growth rate in the new revenue source of about 2 percent annually.

Additional "ramp ups" are assumed to mitigate lost buying power in the years 2013 and 2023, and ultimately may not be from the same source as the original new revenues. These "ramp up" adjustments would be added to the base of each revenue instrument; therefore this exercise is designed to address only the initial and total yield needed without consideration of the "ramp-up" revenue adjustments assumed in each 10-year increment.

Potential Sources

Following is a brief discussion of several potential revenue sources to fill the state funding gap in Scenarios 2 and 3 (see summary in **Table 8.17**):

- **Fuel Taxes** – The yield from Louisiana's 20-cent per gallon fuel taxes is discussed in considerable detail earlier in this chapter. The fuel tax is a "traditional" revenue source that grows at about 2 percent annually, yielding about $21.5 million from gasoline and about $6 million from diesel fuel per penny in year 1 (FY 2003). Thus, a five-cent increase in both fuel taxes would yield about $137 million in year 1 and $5.57 billion over the 30-year period.

- **Sales Tax on Fuel**– Louisiana does not now levy a tax on the sale of motor fuel, though at least ten states do levy such a tax. A 4 percent statewide sales tax levy on motor fuel sold in Louisiana would yield about $89 million in the first year, and the revenues would grow at the same rate as price and gallons sold, about 2 percent annually. This estimate is based on an assumed average price of $1.20 per gallon for gasoline and $1.26 per gallon for diesel, of which only $0.816 is subject to the sales tax since $0.384 for gasoline and $0.444 for diesel is federal and state excise tax. A 4 percent statewide sales tax on motor fuels is estimated to generate $3.26 billion over the 30-year period.

- **Vehicle Registration Fee** – Louisiana's registration fee schedule for autos ranks about 46th nationwide – the two-year license plate fee averages about $44 for a mid-sized two-year old vehicle, and the State's average registration fee is $18. The levy is based upon 0.1% per year of the vehicle's selling price, with a $10 annual minimum. A 50 percent increase in auto registration fees would yield about $20 million the first year and increase about 1.5% per year through the planning period. This estimate is based on increasing the tax rate by 50 percent but leaving the minimum fee at $10 annually. Total 30-year yield for this user fee increase is estimated at $744 million.

  A similar increase for truck registrations (light trucks, heavy trucks, trailers) would yield about $12 million the first year and $450 million over the 30-year period. Louisiana's truck registration fee schedule is among the lowest (45th) in the US. At present, Louisiana's truck registration fee revenues are deposited in the State General Fund and are <u>not</u> dedicated to transportation.

- **Statewide Sales Tax** – The largest single revenue generator for Louisiana is its' 4 percent statewide sales tax, which produced more than $2.4 billion in FY 00/01. The sales tax on food expired in July 2003, so the overall yield will dip slightly. We estimate the sales tax revenues will grow at 1.5 percent annually. More states are using sales tax revenues to support transportation each year (especially non-highway modes). A 0.25 percent statewide sales tax for transportation (earmark from the existing tax or increase in the rate) would generate about $125 million in its first year, with a 30-year yield of $4.74 billion.

- **Cigarette Tax** – Louisiana's 36-cent per pack tax on cigarettes has been in place since July 2002, when it was increased from 24 cents per pack. The current rate is the 27th highest in the US and yields about $9.4 million per month. The overall trend for cigarette sales is down (real decrease of about 1 - 2% annually), and demand is very elastic (subject to fluctuation) when taxes are increased. Imposition of a 5-cent per pack tax increase can be expected to drive demand down about 15 percent, which would yield about $14 million in the first 12 months, declining thereafter. Overall 30-year yield, assuming no further cigarette tax increases, is estimated at $375 million.

- **Alcohol Tax** – Louisiana taxes beer at 32 cents per gallon, the 12th highest rate in the US, while its wine and spirit taxes are variable. The current beer tax generates about $36 million annually and amounts to 3 cents on a 12-ounce can, and the hard liquor taxes generate nearly $16 million per year. Increasing the alcohol tax rate by 25 percent is expected to have a negligible effect on demand (annual sales increase of 1 - 2 % expected); it is estimated that such an increase would generate $13 million its first year and nearly $500 million over 30 years.

- **Car Rental** – The State levies a tax on car rentals that generates almost $5 million annually, which is deposited in the General Fund. Diversion of this auto rental tax to transportation (or levy of a like amount) would produce $230 million over the Plan time frame of 30 years. The auto rental tax is estimated to grow at about 3% annually.
- **Drivers' License** – Louisiana charges a drivers' license fee of $3.25 per year to operate an automobile (more for chauffer and truck licenses), which is one of the lowest rates in the US. A $5 annual increase in these fees would generate about $13 million annually and more than $500 million over 30 years.
- **Other Taxes** – Louisiana's state government is financed by a host of other fees and taxes, most of which could be earmarked for transportation. However, most generate very little in the way of revenue or are such traditional General Fund sources that they are not considered to be likely sources of transportation revenues. Among these are individual and corporate income taxes, severance taxes, corporate franchise taxes, occupancy taxes, and inheritance/estate taxes.

The following table summarizes the above discussion:

Table 8.17
Potential Transportation Funding Sources
(Yield in Millions of Dollars)

Funding Source	Amount	Year 1	Year 10	Year 20	Year 30	Total Funds 2003-2032
Gasoline Tax	5 cents/gallon	107.3	128.2	156.3	190.5	**4,353.0**
Diesel Tax	5 cents/gallon	30.1	36.0	43.9	53.5	**1,221.1**
Sales Tax on Fuel	4 %	89.3	106.7	130.1	158.6	**3.26**
Auto Registration	50% increase	19.8	22.7	26.3	30.5	**744.1**
Truck Registration	50% increase	12.0	13.7	15.9	18.5	**450.5**
Statewide Sales Tax	0.25 %	126.3	144.4	167.6	194.5	**4,740.7**
Cigarette Tax	5 cents/pack	14.4	13.2	11.9	10.8	**375.3**
Alcohol Tax	25% increase	13.3	15.1	17.6	20.4	**497.4**
Auto Rental Tax	Diversion	4.9	6.4	8.6	11.6	**233.6**
Drivers' License	$5/year	13.6	15.6	18.0	20.9	**510.5**

Using the estimates from **Table 8.17**, following are several examples of how the $250 million in State funds to implement Scenarios 2 and 3 of the Plan could be raised. In any of these examples, a portion of the needed revenues could be obtained by dedicating existing transportation-related fees to Plan implementation, including (a) appropriations from the Transportation Trust Fund to fund state police operations ($40 million); (b) truck registration fees ($24 million); (c) proceeds from the 4 percent State sales tax on diesel fuel used by railroads while operating in Louisiana ($2-3 million); and (d) proper credit to the Transportation Trust Fund for the proceeds from the 4 percent State sales tax on aviation fuel sold in Louisiana ($1.5 million additional). However, the problem with such an approach is that a funding gap would be created in the State General Fund by dedicating (i.e., transferring) these transportation-related fees to Plan implementation. Nevertheless, the first example listed below is based on dedicating these revenues and a portion of regular General Fund monies to Plan implementation. The other five examples below focus only on raising additional revenues from various sources:

Example 1: Appropriate $250 million annually in General Fund revenues to Plan implementation including all transportation-related fees as noted above.

Example 2: Increase the State general sales tax by 0.50 percent (i.e., from 4.00 percent to 4.50 percent).

Example 3: Increase the State fuel tax by 9 cents per gallon (i.e., from 20 cents/gallon to 29 cents/gallon).

Example 4: Increase the State fuel tax by 5 cents per gallon (i.e., from 20 cents/gallon to 25 cents/gallon) and increase the State general sales tax by 0.25 percent (i.e., from 4.00 percent to 4.25 percent).

Example 5: Increase the State fuel tax by 5 cents per gallon (i.e., from 20 cents/gallon to 25 cents/gallon) and apply the existing State sales tax of 4.00 percent to fuel and increase auto registration/truck registration/driver's license fees sufficiently to generate approximately $25 million annually (about 40 percent increase).

Example 6: Increase the State fuel tax by 8 cents per gallon (from 20 cents/gallon to 28 cents/gallon) and (a) increase auto registration/truck registration/driver's license fees sufficiently to generate approximately $30 million annually or (b) increase the State general sales tax by 0.10 percent (i.e., from 4.00 percent to 4.10 percent). [Note: In theory, a 0.10 percent increase in the State general sales tax would generate approximately $50 million annually. However, considering that such an increase would not affect purchases of less than $5 due to rounding to the nearest cent, a 0.10 percent sales tax increase would likely yield considerably less.]

"Hold Harmless" Provisions

Several of the specific projects included in Scenarios 2 and 3 of the Plan have advanced to the point where non-traditional finance methods (such as tolls and/or local funding) may be used to initiate construction of the entire project, or portions thereof, before the State and Federal funds called for become available. These projects will be "held harmless" in that when the State and Federal funding called for in the Plan becomes available, any remaining costs or debt can be

retired to the extent that such remaining costs or debt does not exceed the cost of implementing the project through traditional financing.

Inflation Adjustments

Implementation of Scenarios 1B, 2, and 3 of the Plan are dependent upon adjustments to the transportation revenue stream every 10 years to account for the effects of inflation (i.e., to restore base-year buying power). This can be accomplished through tax rate adjustments effective at the beginning of the 11th and 21st years of Plan implementation or the revenue stream can be "indexed" to inflation wherein tax rate adjustments are made each year. The "indexing" approach would spread the impacts of the tax rate adjustments over the entire 30-year period as opposed to implementing comparatively large adjustments at each 10-year point in Plan implementation.