

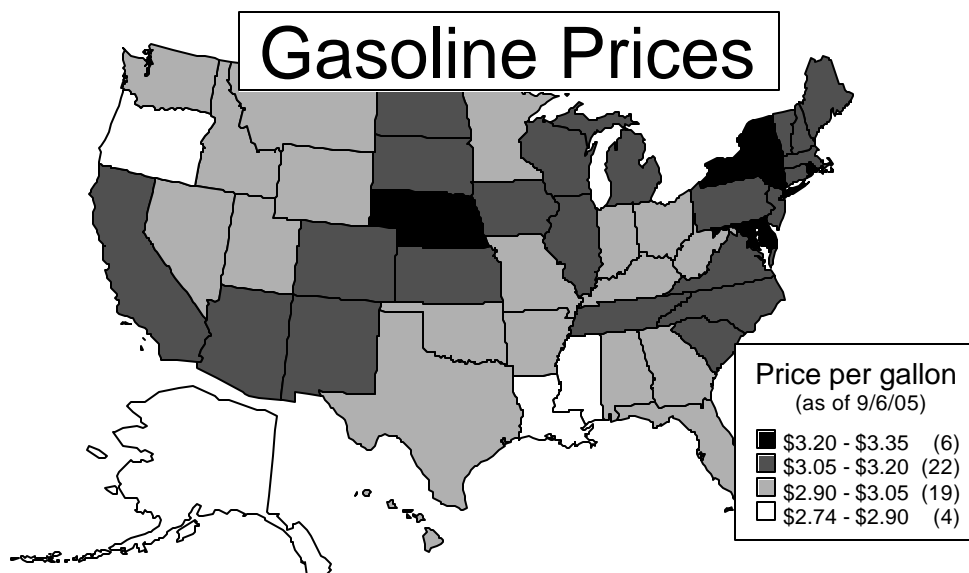
Gasoline Taxes and Rising Fuel Prices in the Aftermath of Katrina

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In the aftermath of Hurricane Katrina, there have been proposals both to cap gasoline prices (e.g., Hawaii) or to suspend the collection of state or federal gas taxes (e.g., Georgia) as a response to rising gas prices. Lowering prices artificially through caps or suspension of gas taxes could actually exacerbate the situation since taxes are not to blame for current high prices. High prices are currently a response to the decreased supply of gasoline and indeed partially curtail demand. If prices are lowered artificially with price caps, we can expect shortages and potentially a return to the gas lines of the 1970s. If gas taxes are removed, it is not clear that the decline would translate into lower prices for consumers versus increases in pre-tax prices and higher returns to gas stations. If only some states remove taxes and if retail (after-tax) prices in these states fell, it could lead to a shift in demand across state lines, costing not only the state suspending its taxes funds but also lowering revenues for neighbor states as well.

From January to July, retail gasoline prices increased from an average of \$1.78 per gallon to \$2.22 per gallon (as of June 27, 2005), marking an all-time high in nominal gasoline prices and the highest real prices since 1985. In the last week, these prices have spiked to a U.S. average of \$3.07, an all-time high in both nominal and real terms. Figure 1 shows average prices across states. Prices in most states neared or surpassed \$3.00, with Louisiana having the lowest average price (\$2.74) and Washington, D.C., having the highest (\$3.35). Table 1 compares average prices by state at the end of June and the period following Labor Day.

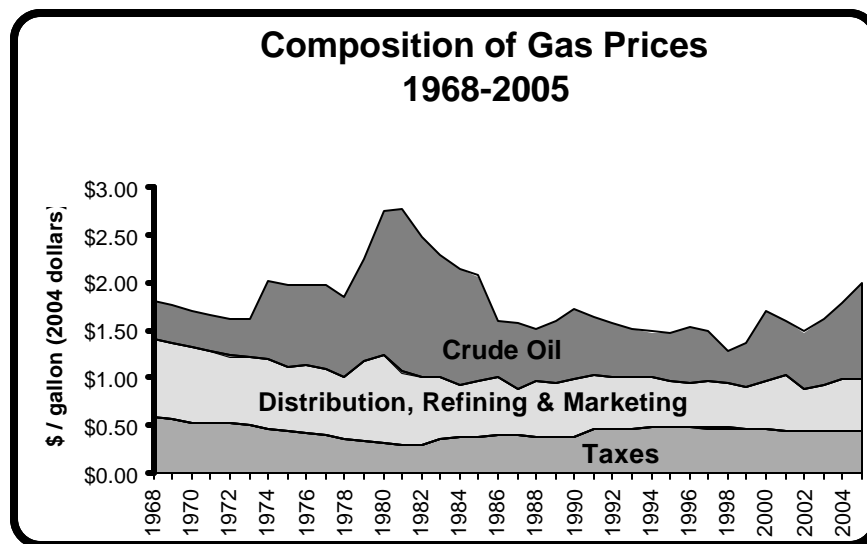
Figure 1: Average Regular Gas Prices by State



Gasoline taxes, however, have varied little in nominal terms throughout the past decade and they have even fallen after adjusting for inflation. Figure 2 shows the composition of gas prices from 1968 to 2005 in 2004

dollars. Since 1997, the federal tax has remained at 18.4 cents per gallon (cpg) while the average state gasoline excise tax increased from 22 cpg to 25.6 cpg. Factoring in inflation, the real value of total gasoline taxes has fallen from 58 cpg to 43 cpg (in 2004 dollars) since 1968. The share of total gasoline prices attributable to taxes has also declined (table 2). In 1995, taxes accounted for approximately 33 percent of gas prices; in the first half of 2005, taxes accounted for 22 percent. If gasoline taxes had remained constant in real dollars at 1968 levels, we estimate that gasoline consumption would be about 7 percent lower than current levels. Approximately a third of the effect would have been due to decreased driving while two-thirds would have represented a shift towards more fuel-efficient cars.¹

Figure 2: Composition of Gas Prices, 1968–2005 (2004\$)

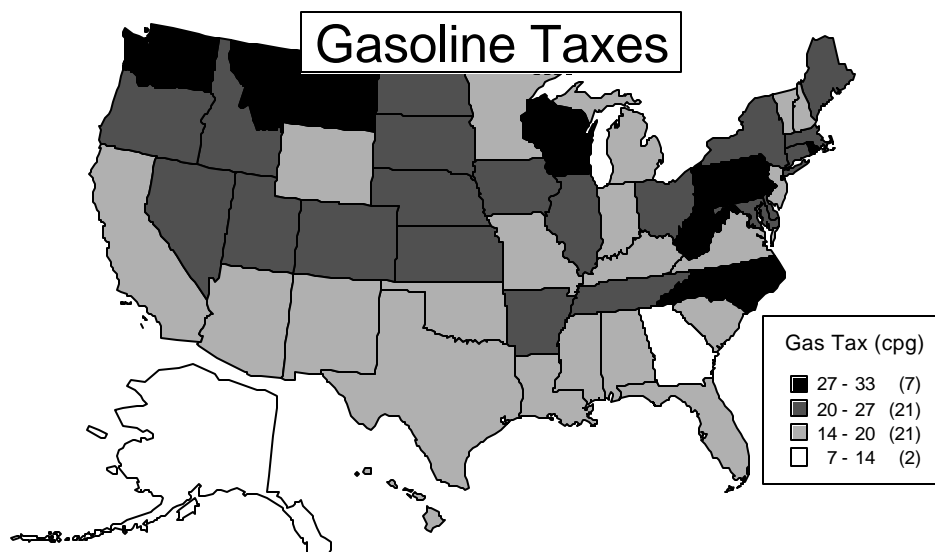


Sources: The graph is constructed using information from the Energy Information Administration, Department of Energy, Washington DC and the America Petroleum Institute, Washington, DC.

Differences in taxes also explain very little of the gas price differentials between states. State gasoline excise taxes vary from 7.5 cpg in Georgia to 32.9 cpg in Wisconsin (figure 3). Eleven states also levy sales and other taxes (table 3). While California typically has the highest average gas prices in the nation (East Coast prices now exceed California prices because of distribution problems in the wake of Katrina), its gasoline tax rate is 18 cpg, the 12th lowest tax. In comparison, Texas, with its low gas prices, charges a tax of 20 cpg. Most of the variation in gasoline prices is due to changes in supply and demand and differing environmental standards. (Although, all else equal, higher taxes will lead to higher prices.) Gasoline prices are generally highest on the West Coast and in the Northeast and lowest in Gulf Coast states.

¹ This is based on elasticity estimates from Agravas and Chapman (1999).

Figure 3: Gas Taxes by State



The recent impact of high gas prices is exacerbated by changes over the past decade in the types of vehicles purchased. Light trucks (including SUVs) made up almost half (49 percent) of new vehicles purchased in 2003, up from 30 percent in 1990 (table 4). While fuel efficiency has improved over time for individual classes of vehicles, the increase in sales of light trucks (largely due to SUVs) has led to a decline in the overall average fuel economy (sales-weighted) from 22 miles per gallon to 20.8 mpg between 1990 and 2005.

Finally, it is important to note what gasoline taxes are used for. The vast majority of both federal and state gasoline taxes are used to construct and maintain our highways and roads (table 5). The 18.4 cpg federal gas tax is currently distributed with 15.44 cents going to highways, 2.86 cents going to mass transit, and 0.1 cent going to the leaking underground storage tank trust fund. Thus, tax abatement programs could not only exacerbate shortages, but also decrease funds needed for the important reconstruction work required in the aftermath of the current disaster.

References

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Table 1: Regular Gas Prices by State, 6/30/2005 and 9/6/2005AAA Daily Fuel Gauge Report, <http://www.fuelgaugereport.com/sbsavg.asp>

State	6/3/2005	9/6/2005
Alabama	\$2.13	\$2.96
Alaska	\$2.29	\$2.75
Arizona	\$2.30	\$3.12
Arkansas	\$2.12	\$2.98
California	\$2.48	\$3.05
Colorado	\$2.19	\$3.07
Connecticut	\$2.32	\$3.07
Delaware	\$2.22	\$3.22
District of Columbia	\$2.30	\$3.35
Florida	\$2.23	\$2.99
Georgia	\$2.14	\$2.99
Hawaii	\$2.57	\$3.02
Idaho	\$2.27	\$2.93
Illinois	\$2.28	\$3.08
Indiana	\$2.21	\$3.04
Iowa	\$2.15	\$3.07
Kansas	\$2.19	\$3.08
Kentucky	\$2.16	\$2.97
Louisiana	\$2.12	\$2.74
Maine	\$2.23	\$3.14
Maryland	\$2.22	\$3.27
Massachusetts	\$2.24	\$3.16
Michigan	\$2.29	\$3.05
Minnesota	\$2.16	\$2.95
Mississippi	\$2.12	\$2.75
Missouri	\$2.12	\$3.02
Montana	\$2.27	\$2.91
Nebraska	\$2.23	\$3.20
Nevada	\$2.42	\$2.99
New Hampshire	\$2.20	\$3.06
New Jersey	\$2.14	\$3.15
New Mexico	\$2.27	\$3.08
New York	\$2.34	\$3.25
North Carolina	\$2.16	\$3.14
North Dakota	\$2.20	\$3.14
Ohio	\$2.22	\$3.01
Oklahoma	\$2.10	\$3.00
Oregon	\$2.31	\$2.89
Pennsylvania	\$2.23	\$3.19
Rhode Island	\$2.27	\$3.21
South Carolina	\$2.08	\$3.14
South Dakota	\$2.21	\$3.11
Tennessee	\$2.11	\$3.09
Texas	\$2.13	\$2.96
Utah	\$2.22	\$2.90
Vermont	\$2.19	\$3.14
Virginia	\$2.14	\$3.13
Washington	\$2.34	\$2.92
West Virginia	\$2.26	\$3.01
Wisconsin	\$2.30	\$3.06
Wyoming	\$2.17	\$2.92

Table 2: Components of Retail Gasoline Prices - 1968-2004 (2004\$)

Year	Crude Oil	Distribution, Refining, and Marketing	Taxes	Total Gas Price	Excise Tax as % of Retail Price
1968	\$0.40	\$0.82	\$0.58	\$1.80	32%
1969	\$0.40	\$0.81	\$0.56	\$1.77	32%
1970	\$0.39	\$0.79	\$0.53	\$1.71	31%
1971	\$0.39	\$0.76	\$0.52	\$1.68	31%
1972	\$0.38	\$0.71	\$0.52	\$1.61	32%
1973	\$0.41	\$0.71	\$0.50	\$1.63	31%
1974	\$0.82	\$0.73	\$0.46	\$2.01	23%
1975	\$0.86	\$0.68	\$0.43	\$1.96	22%
1976	\$0.85	\$0.72	\$0.41	\$1.98	21%
1977	\$0.88	\$0.71	\$0.39	\$1.97	20%
1978	\$0.85	\$0.65	\$0.36	\$1.86	19%
1979	\$1.08	\$0.84	\$0.34	\$2.26	15%
1980	\$1.51	\$0.94	\$0.31	\$2.76	11%
1981	\$1.72	\$0.76	\$0.30	\$2.77	11%
1982	\$1.46	\$0.72	\$0.29	\$2.47	12%
1983	\$1.29	\$0.64	\$0.36	\$2.29	16%
1984	\$1.22	\$0.54	\$0.38	\$2.15	18%
1985	\$1.10	\$0.59	\$0.38	\$2.07	18%
1986	\$0.59	\$0.61	\$0.39	\$1.58	25%
1987	\$0.70	\$0.49	\$0.39	\$1.57	25%
1988	\$0.55	\$0.59	\$0.38	\$1.52	25%
1989	\$0.64	\$0.57	\$0.38	\$1.59	24%
1990	\$0.75	\$0.60	\$0.38	\$1.73	22%
1991	\$0.62	\$0.57	\$0.45	\$1.64	27%
1992	\$0.58	\$0.55	\$0.45	\$1.58	28%
1993	\$0.50	\$0.55	\$0.46	\$1.51	30%
1994	\$0.47	\$0.52	\$0.49	\$1.48	33%
1995	\$0.50	\$0.48	\$0.49	\$1.47	33%
1996	\$0.59	\$0.46	\$0.48	\$1.53	31%
1997	\$0.53	\$0.50	\$0.47	\$1.50	31%
1998	\$0.34	\$0.47	\$0.47	\$1.27	37%
1999	\$0.47	\$0.44	\$0.46	\$1.37	34%
2000	\$0.73	\$0.51	\$0.46	\$1.69	27%
2001	\$0.57	\$0.59	\$0.44	\$1.61	27%
2002	\$0.59	\$0.46	\$0.43	\$1.49	29%
2003	\$0.69	\$0.50	\$0.43	\$1.62	27%
2004	\$0.79	\$0.56	\$0.43	\$1.79	24%
2005*	\$1.00	\$0.56	\$0.43	\$1.99	22%

Source: American Petroleum Institute, "Changes in the major components of gasoline prices, 1968-2004", <http://api-ec.api.org/filelibrary/ChangesintheMajorComponentsofGasolinePrices1968-20041.pdf>

*The 2005 average was calculated by taking the straight average of weekly gas price data from eia.doe.gov for January - June 27, 2005. Then, the straight average and the API 6/27/2005 price decomposition (\$1.24, \$.58, \$.44) were indexed to 2004. We adjusted the crude oil amount to \$1.00 (assuming that taxes and marketing/refining/distribution were constant through the 2005 period) to arrive at the final composition.

Table 3: Motor Fuel Excise Tax Rates 1-Jan-05

State	Gasoline Taxes			Diesel Fuel Taxes			Gasohol Taxes			Notes
	Excise	Add'l	Total	Excise	Add'l	Total	Excise	Add'l	Total	
Alabama /1	16	2	18	19		19	16	2	18	Inspection fee
Alaska	8		8	8		8	0		0	
Arizona	18		18	18		18	18		18	/3
Arkansas	21.5		21.5	22.5		22.5	21.5		21.5	
California	18		18	18		18	18		18	Sales tax applicable
Colorado	22		22	20.5		20.5	22		22	
Connecticut	25		25	26		26	25		25	
Delaware	23		23	22		22	23		23	Plus 0.5% GRT /5
Florida /2	4	10.5	14.5	16.8	10.5	27.3	4	10.5	14.5	Sales tax added to excise /2
Georgia	7.5		7.5	7.5		7.5	7.5		7.5	Sales tax applicable (3%)
Hawaii /1	16		16	16		16	16		16	Sales tax applicable
Idaho	25		25	25		25	22.5		22.5	/6
Illinois /1	19	1.1	20.1	21.5	1.1	22.6	19	1.1	20.1	Sales tax add., env. & LUST fee /3
Indiana	18		18	16		16	18		18	Sales tax applicable /3
Iowa	20.5		20.5	22.5		22.5	19		19	
Kansas	24		24	26		26	24		24	
Kentucky	16	1.4	17.4	13	1.4	14.4	16	1.4	17.4	Environmental fee /4 /3
Louisiana	20		20	20		20	20		20	
Maine	25.2		25.2	26.3		26.3	25.2		25.2	/5
Maryland	23.5		23.5	24.25		24.25	23.5		23.5	
Massachusetts	21		21	21		21	21		21	
Michigan	19		19	15		15	19		19	Sales tax applicable
Minnesota	20		20	20		20	20		20	
Mississippi	18	0.4	18.4	18	0.4	18.4	18	0.4	18.4	Environmental fee
Missouri	17	0.03	17.03	17	0.03	17.03	17	0.03	17.03	Inspection fee
Montana	27		27	27.75		27.75	27		27	
Nebraska	25.4	0.9	26.3	25.4	0.9	26.3	25.4	0.9	26.3	Petroleum fee /5
Nevada /1	23		23	27		27	23		23	
New Hampshire	18	1.5	19.5	18	1.5	19.5	18	1.5	19.5	Oil discharge cleanup fee
New Jersey	10.5	4	14.5	13.5	4	17.5	10.5	4	14.5	Petroleum fee
New Mexico	17	1.9	18.9	21	1.9	22.9	17	1.9	18.9	Petroleum loading fee
New York	8	15.2	23.2	8	13.45	21.45	8	15.2	23.2	Sales tax applicable, Petrol. Tax
North Carolina	26.6	0.25	26.85	26.6	0.25	26.85	26.6	0.25	26.85	/4 Inspection tax
North Dakota	21		21	21		21	21		21	
Ohio	26		26	26		26	26		26	Plus 3 cents commercial
Oklahoma	16	1	17	13	1	14	16	1	17	Environmental fee
Oregon /1	24		24	24		24	24		24	
Pennsylvania	12	18	30	12	24.4	36.4	12	18	30	Oil franchise tax
Rhode Island	30	1	31	30	1	31	30	1	31	LUST tax
South Carolina	16		16	16		16	16		16	
South Dakota /1	22		22	22		22	20		20	
Tennessee /1	20	1.4	21.4	17	1.4	18.4	20	1.4	21.4	Petroleum Tax & Envir. Fee
Texas	20		20	20		20	20		20	
Utah	24.5		24.5	24.5		24.5	24.5		24.5	
Vermont	19	1	20	25	1	26	19	1	20	Petroleum cleanup fee
Virginia /1	17.5		17.5	16		16	17.5		17.5	Large trucks pay an addtl \$0.035.
Washington	28		28	28		28	28		28	0.5% privilege tax
West Virginia	20.5	6.5	27	20.5	6.2	27	20.5	6.5	27	Sales tax added to excise
Wisconsin	29.1		29.1	29.1		29.1	29.1		29.1	/5
Wyoming	13	1	14	13	1	14	13	1	14	License tax
DC	22.5		22.5	22.5		22.5	22.5		22.5	
Federal	18.3	0.1	18.4	24.3	0.1	24.4	13	0.1	13.1	/6 LUST tax

/1 Tax rates do not include local option taxes.

/2 Local taxes for gasoline and gasohol vary from 9.7 cents to 17.7 cents. Plus a 2.07 cent per gallon pollution tax.

/3 Carriers pay an additional surcharge equal to AZ-8 cents, IL-6.3 cents (g) 6.0 cents (d), IN-11 cents, KY-2% (g) 4.7% (d).

/4 Tax rate is based on the average wholesale price and is adjusted quarterly. The actual rates are: KY, 9%; and NC, 17.5¢ + 7%.

/5 Portion of the rate is adjustable based on maintenance costs, sales volume, or inflation.

/6 Tax rate is reduced by the percentage of ethanol used in blending (reported rate assumes the max. 10% ethanol).

Compiled by FTA from various sources.

Table 4: EPA-adjusted Fuel Economy Values and Truck Sales Fraction, 1975–2004 (mpg)

Model Year	Cars	Trucks	Cars and Trucks	Truck Sales Fraction
1976	14.9	12.2	14.2	0.202
1977	15.6	13.3	15.1	0.213
1978	16.9	12.9	15.8	0.216
1979	17.2	12.5	15.9	0.205
1980	20	15.8	19.2	0.187
1981	21.4	17.1	20.5	0.178
1982	22.2	17.4	21.1	0.198
1983	22.1	17.8	21	0.22
1984	22.4	17.4	21	0.239
1985	23	17.5	21.3	0.259
1986	23.8	18.3	21.9	0.272
1987	24	18.4	22.1	0.286
1988	24.4	18.1	22.1	0.294
1989	24	17.8	21.7	0.302
1990	23.7	17.7	22	0.31
1991	23.9	18.1	21.7	0.319
1992	23.6	17.8	21.3	0.339
1993	24.1	17.9	21.4	0.364
1994	24	17.7	21	0.379
1995	24.2	17.5	21.1	0.393
1996	24.2	17.8	21.2	0.401
1997	24.3	17.6	20.9	0.424
1998	24.4	17.8	20.9	0.441
1999	24.1	17.5	20.6	0.449
2000	24.1	17.7	20.7	0.453
2001	24.3	17.6	20.7	0.465
2002	24.5	17.6	20.6	0.484
2003	24.7	17.8	20.7	0.491
2004	24.6	17.9	20.8	

Table 5: Disposition of State Motor-Fuel Tax Receipts - 2003

	Net Funds Distributed (thousands) 2/	State Highways	Local Roads	MTA	General/Non- Highway
Alabama	544,311	89.39%	8.27%	0.01%	2.33%
Alaska 1/	27,309	96.02%	3.87%	0.11%	0.00%
Arizona	610,021	60.07%	38.44%	1.17%	0.32%
Arkansas	431,221	70.49%	27.31%	0.37%	1.84%
California	3,151,308	21.50%	50.99%	6.22%	21.29%
Colorado	541,579	77.15%	19.98%	2.87%	0.00%
Connecticut	443,381	62.60%	4.47%	29.96%	2.97%
Delaware	108,699	100.00%	0.00%	0.00%	0.00%
Dist. of Col. 1/	26,749	0.00%	100.00%	0.00%	0.00%
Florida	1,829,482	77.02%	11.02%	10.02%	1.95%
Georgia	463,660	68.00%	12.56%	0.63%	18.82%
Hawaii	73,427	95.96%	0.00%	0.00%	4.04%
Idaho	204,792	50.52%	47.09%	0.54%	1.85%
Illinois	1,255,512	34.92%	53.33%	9.99%	1.75%
Indiana	1,073,885	41.25%	58.74%	0.00%	0.00%
Iowa	408,092	20.62%	76.15%	2.21%	1.01%
Kansas	416,159	44.49%	47.72%	0.59%	7.19%
Kentucky	498,960	60.18%	30.64%	0.00%	9.18%
Louisiana	572,962	96.07%	3.84%	0.00%	0.09%
Maine	211,931	80.05%	13.99%	0.96%	5.00%
Maryland	705,114	15.75%	39.64%	27.80%	16.81%
Massachusetts	662,316	76.70%	23.30%	0.00%	0.00%
Michigan	1,064,628	46.96%	41.79%	11.25%	0.00%
Minnesota	623,927	40.17%	58.02%	1.80%	0.00%
Mississippi	385,661	49.61%	45.38%	0.24%	4.78%
Missouri	676,399	66.27%	32.11%	1.43%	0.19%
Montana	179,259	89.45%	9.69%	0.86%	0.00%
Nebraska	300,570	42.28%	53.84%	0.02%	3.86%
Nevada	413,348	70.38%	27.02%	0.00%	2.60%
New Hampshire	154,776	77.42%	14.95%	1.43%	6.20%
New Jersey 1/	548,821	44.84%	16.57%	17.45%	21.13%
New Mexico	238,693	66.73%	23.81%	0.46%	9.00%
New York	1,502,520	47.09%	16.07%	34.20%	2.63%
North Carolina	1,165,154	76.21%	8.08%	2.07%	13.65%
North Dakota	105,304	39.86%	58.79%	0.17%	1.19%
Ohio	1,384,878	51.55%	46.69%	0.00%	1.76%
Oklahoma	399,613	24.82%	46.93%	0.54%	27.72%
Oregon	392,644	82.33%	15.64%	1.28%	0.76%
Pennsylvania	1,687,793	63.63%	8.55%	27.82%	0.00%
Rhode Island 1/	143,289	53.24%	1.21%	22.78%	22.77%
South Carolina	454,022	57.01%	15.05%	1.08%	26.86%
South Dakota	122,478	72.03%	14.66%	1.55%	11.77%
Tennessee	789,114	53.28%	37.00%	0.00%	9.73%
Texas	2,760,032	73.56%	0.34%	0.00%	26.10%
Utah	318,990	65.75%	34.22%	0.00%	0.03%
Vermont	86,415	68.07%	25.28%	4.84%	1.82%
Virginia	831,152	58.78%	14.63%	8.46%	18.14%
Washington	732,863	56.20%	39.21%	2.25%	2.34%
West Virginia	286,712	99.63%	0.00%	0.00%	0.37%
Wisconsin	884,619	41.81%	45.65%	6.59%	5.95%
Wyoming	86,343	78.37%	20.54%	1.08%	0.00%
Total	32,980,887	55.97%	28.54%	7.04%	8.44%

1/ In these States, most highway -user revenues are placed in the State general fund. For a discussion of general fund States' financing, see "Highway Finance" text under "Funds Attributable to Highway Users."

2/ The distributions shown include both specific dedications and the prorated share of motor-fuel tax

Source: "Disposition of State Motor-Fuel Tax Receipts - 2003", *Highway Statistics 2003*. Federal Highway Administration, Department of Transportation. <http://www.fhwa.dot.gov/policy/ohim/hs03/hfmf3.htm>