

## D. Detailed Results of Energy Intensity Analysis

Tables D.1 through D.3 list detailed data on the changes in energy intensity in each of the 48 contiguous states over the entire study period 1977–1999 and over the subperiods 1977–1988 and 1989–1999. The tables also rank the states according to the amount of change in residual energy intensity. The results are presented by individual energy-consuming sector and by all four sectors collectively (total aggregate).

The following list defines the column headlines in the tables:

- Raw Energy Intensity Average % Change = Energy intensity average percent change over the time period (average intensity percent change equals the residual plus the factor effect plus the time effect).
- Residual Average % Change = Average percent change in energy intensity due to the residual over the time period.
- Variate Average % Percent Change = Average percent change in energy intensity due to the factors measured in the regression analyses.
- Residual Ranking = How the state ranks in its change in residual energy intensity. The states are ranked in order from 1 to 48, with the state ranked 1 having the greatest reduction in residual energy intensity.
- Movement = How much the residual ranking moved from the Raw Energy Intensity Average % Change. For example, a residual ranking of 15 and a movement of –5 means that the state ranked 10th in the amount of actual energy intensity changes.

Table D.1A

## Energy Intensity Analysis Data for the Entire Study Period 1977–1999: Industrial, Commercial, and Residential Sectors

State	Industrial Sector					Commercial Sector					Residential Sector				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
Alabama	-0.92%	-0.58%	0.58%	13	11	-0.91%	1.23%	-1.05%	46	-3	0.56%	0.24%	1.40%	37	9
Arizona	-4.59%	-1.55%	-2.11%	6	-5	-2.84%	-1.04%	-0.71%	4	2	-0.10%	0.14%	0.85%	33	-3
Arkansas	0.35%	0.79%	0.48%	38	4	-2.68%	-0.52%	-1.06%	11	-4	-0.43%	-0.40%	1.06%	5	8
California	-1.01%	0.15%	-0.25%	28	-7	-3.27%	-1.14%	-1.04%	3	1	-1.14%	-0.05%	0.00%	21	-19
Colorado	-2.53%	-0.09%	-1.52%	23	-14	-2.06%	0.16%	-1.13%	31	-9	-0.12%	0.06%	0.91%	29	-1
Connecticut	-2.75%	-1.32%	-0.50%	8	-1	-2.66%	0.08%	-1.64%	28	-20	-0.04%	-0.11%	1.16%	17	16
Delaware	-0.07%	0.52%	0.33%	31	8	-5.00%	0.37%	-4.28%	37	-36	0.21%	0.04%	1.25%	28	9
Florida	-1.99%	-0.50%	-0.57%	15	-4	-1.74%	0.29%	-0.94%	35	-1	0.30%	0.66%	0.73%	48	-7
Georgia	-0.90%	-0.40%	0.42%	17	8	-2.41%	-0.12%	-1.19%	21	-7	0.26%	0.30%	1.05%	41	-3
Idaho	-1.43%	0.94%	-1.46%	41	-26	-2.13%	-0.98%	-0.06%	6	12	-0.15%	0.49%	0.45%	46	-20
Illinois	-0.99%	0.62%	-0.69%	33	-11	-3.05%	-0.99%	-0.96%	5	0	-0.57%	0.07%	0.45%	30	-22
Indiana	-1.65%	-0.26%	-0.47%	20	-7	-1.92%	-0.28%	-0.54%	14	16	-0.23%	0.09%	0.77%	31	-8
Iowa	1.25%	0.73%	1.44%	36	10	-1.99%	-0.44%	-0.46%	12	14	-0.50%	0.01%	0.58%	25	-16
Kansas	-1.13%	0.80%	-1.01%	39	-20	-1.88%	0.33%	-1.11%	36	-5	-0.30%	0.25%	0.54%	38	-17
Kentucky	-0.66%	-0.06%	0.32%	25	3	-2.09%	0.09%	-1.09%	29	-10	0.49%	0.35%	1.23%	43	1
Louisiana	-0.55%	-0.27%	0.64%	19	14	-2.51%	-0.60%	-0.82%	8	1	0.34%	0.32%	1.11%	42	0
Maine	1.22%	1.92%	0.22%	45	0	-1.97%	0.06%	-0.94%	27	0	0.17%	0.19%	1.07%	36	0
Maryland	-3.40%	-2.71%	0.23%	1	1	-0.56%	0.99%	-0.45%	44	1	0.14%	0.04%	1.19%	27	7
Massachusetts	-0.62%	-0.08%	0.38%	24	8	-4.57%	-1.61%	-1.86%	1	1	-0.35%	-0.61%	1.35%	2	17
Michigan	-0.64%	-0.03%	0.31%	26	3	-0.93%	0.89%	-0.73%	41	1	-0.49%	-0.16%	0.76%	13	-3
Minnesota	-0.50%	1.10%	-0.68%	43	-7	-2.47%	-0.26%	-1.12%	15	-4	-0.36%	-0.17%	0.90%	12	6
Mississippi	0.33%	0.61%	0.64%	32	9	-0.97%	0.94%	-0.82%	43	-2	0.58%	0.37%	1.31%	44	3
Missouri	-1.59%	-0.69%	0.02%	12	2	-2.07%	-0.08%	-0.90%	22	-2	-0.40%	-0.06%	0.75%	20	-3
Montana	0.91%	2.38%	-0.55%	48	-4	-2.00%	-0.83%	-0.07%	7	18	-0.68%	-0.24%	0.65%	8	-3
Nebraska	-1.35%	0.11%	-0.54%	27	-11	-2.47%	-0.57%	-0.81%	10	3	-0.30%	0.10%	0.68%	32	-12
Nevada	-0.63%	2.28%	-1.98%	47	-17	-3.28%	-1.41%	-0.78%	2	1	-1.03%	-0.35%	0.41%	6	-3

Table D.1A—Continued

State	Industrial Sector					Commercial Sector					Residential Sector				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
New Hampshire	-2.80%	-0.83%	-1.05%	11	-5	-0.80%	1.95%	-1.65%	48	-4	-0.13%	-0.10%	1.05%	19	8
New Jersey	-0.63%	-0.84%	1.14%	9	22	-2.49%	-0.15%	-1.25%	20	-10	-0.41%	-0.20%	0.88%	9	7
New Mexico	-3.04%	-0.44%	-1.69%	16	-12	-1.58%	-0.18%	-0.31%	19	17	-0.06%	-0.02%	1.05%	23	9
New York	-0.98%	-0.52%	0.47%	14	9	-2.34%	-0.26%	-0.99%	16	-1	-0.10%	0.39%	0.59%	45	-16
North Carolina	-1.94%	-0.84%	-0.18%	10	2	-1.42%	0.49%	-0.81%	40	-2	0.17%	-0.16%	1.42%	14	21
North Dakota	4.85%	2.16%	3.61%	46	2	-0.13%	1.29%	-0.32%	47	0	0.38%	0.29%	1.18%	39	4
Ohio	-1.26%	-0.27%	-0.07%	18	-1	-1.78%	0.22%	-0.90%	33	0	-0.46%	-0.11%	0.74%	18	-6
Oklahoma	-0.72%	-0.23%	0.42%	21	6	-1.41%	-0.01%	-0.30%	26	13	-0.15%	0.30%	0.64%	40	-15
Oregon	-2.96%	0.75%	-2.79%	37	-32	-2.07%	-0.58%	-0.40%	9	12	-0.41%	0.15%	0.52%	34	-19
Pennsylvania	-2.47%	-1.50%	-0.05%	7	3	-1.94%	-0.24%	-0.61%	17	12	-0.61%	-0.56%	1.04%	3	4
Rhode Island	1.61%	0.66%	1.87%	35	12	-2.47%	-0.29%	-1.08%	13	-1	-0.06%	-0.20%	1.22%	10	21
South Carolina	-0.54%	0.93%	-0.55%	40	-6	-2.34%	-0.18%	-1.07%	18	-2	0.71%	0.02%	1.78%	26	22
South Dakota	-1.21%	-1.92%	1.63%	2	16	-2.01%	-0.07%	-0.84%	23	1	-0.42%	-0.13%	0.80%	15	-1
Tennessee	-2.72%	-1.83%	0.04%	4	4	-1.35%	0.92%	-1.18%	42	-2	-0.24%	-0.27%	1.11%	7	15
Texas	-0.43%	-0.22%	0.71%	22	15	-2.19%	-0.02%	-1.08%	25	-8	-0.23%	0.18%	0.68%	35	-11
Utah	-3.18%	-1.84%	-0.42%	3	0	-1.80%	-0.07%	-0.63%	24	8	-1.20%	-0.76%	0.65%	1	0
Vermont	-0.74%	0.63%	-0.45%	34	-8	-2.03%	0.25%	-1.19%	34	-11	-0.64%	-0.48%	0.93%	4	2
Virginia	0.05%	0.42%	0.55%	29	11	-1.56%	0.44%	-0.91%	39	-2	0.29%	-0.05%	1.43%	22	17
Washington	-1.10%	0.98%	-1.16%	42	-22	-1.96%	0.17%	-1.04%	32	-4	-0.72%	-0.02%	0.39%	24	-20
West Virginia	-0.50%	-1.56%	1.98%	5	30	-0.18%	0.41%	0.50%	38	8	0.30%	-0.13%	1.52%	16	24
Wisconsin	-0.39%	0.45%	0.08%	30	8	-1.64%	0.15%	-0.69%	30	5	-0.48%	-0.19%	0.80%	11	0
Wyoming	0.64%	1.49%	0.08%	44	-1	0.50%	1.17%	0.42%	45	3	0.50%	0.50%	1.08%	47	-2
Statewide Average	-0.96%		-0.05%			-1.99%		-0.89%			-0.17%		0.92%		

Table D.1B

## Energy Intensity Analysis Data for the Entire Study Period 1977–1999: Transportation Sector and Total Aggregate

State	Transportation Sector					Total Aggregate Energy Intensity				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
Alabama	-1.05%	-1.29%	1.50%	1	0	-1.91%	0.06%	-1.49%	29	3
Arizona	-0.43%	-0.59%	1.42%	5	1	-3.07%	-0.57%	-2.02%	2	3
Arkansas	0.34%	-0.18%	1.77%	14	16	-1.48%	0.43%	-1.43%	42	-2
California	-0.78%	-0.52%	0.99%	7	-3	-2.54%	-0.41%	-1.64%	8	4
Colorado	-0.23%	-0.52%	1.54%	6	3	-2.87%	-0.02%	-2.37%	26	-19
Connecticut	0.24%	0.21%	1.28%	36	-15	-3.18%	0.12%	-2.82%	30	-26
Delaware	0.53%	0.25%	1.54%	37	-2	-3.32%	-0.44%	-2.40%	5	-2
Florida	-0.04%	-0.28%	1.50%	11	0	-2.30%	-0.29%	-1.53%	11	10
Georgia	0.60%	0.04%	1.81%	25	11	-2.35%	0.23%	-2.10%	38	-19
Idaho	0.09%	0.12%	1.22%	31	-16	-1.86%	-0.12%	-1.26%	22	12
Illinois	0.13%	0.06%	1.33%	27	-10	-2.61%	-0.43%	-1.70%	6	5
Indiana	0.79%	0.31%	1.73%	39	3	-1.92%	-0.34%	-1.09%	9	22
Iowa	0.30%	-0.13%	1.69%	17	7	-0.93%	0.49%	-0.94%	44	1
Kansas	-0.54%	-0.83%	1.55%	3	2	-2.16%	0.14%	-1.82%	34	-12
Kentucky	0.89%	0.42%	1.73%	44	0	-1.50%	-0.05%	-0.97%	25	14
Louisiana	-0.03%	-0.39%	1.62%	9	3	-1.54%	-0.22%	-0.83%	13	25
Maine	0.44%	0.13%	1.57%	32	1	-1.72%	0.55%	-1.79%	45	-9
Maryland	0.06%	-0.18%	1.50%	13	1	-2.53%	-0.12%	-1.93%	21	-8
Massachusetts	0.33%	-0.02%	1.60%	22	6	-3.53%	-0.41%	-2.64%	7	-6
Michigan	0.38%	-0.06%	1.70%	18	14	-1.39%	-0.19%	-0.71%	16	26
Minnesota	0.71%	0.19%	1.78%	35	5	-1.97%	0.56%	-2.05%	46	-16
Mississippi	1.15%	0.73%	1.67%	45	1	-0.74%	0.76%	-1.02%	47	-1
Missouri	0.71%	0.35%	1.62%	41	-2	-1.80%	0.26%	-1.57%	39	-4
Montana	0.33%	0.27%	1.31%	38	-9	-1.01%	0.14%	-0.67%	33	11
Nebraska	0.31%	-0.15%	1.72%	15	12	-2.12%	-0.13%	-1.51%	19	5
Nevada	-0.95%	-0.41%	0.72%	8	-5	-2.30%	-0.29%	-1.53%	12	8

Table D.1B—Continued

State	Transportation Sector					Total Aggregate Energy Intensity				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Movement	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Movement
New Hampshire	0.81%	0.37%	1.70%	42	1	-3.40%	0.13%	-3.04%	32	-30
New Jersey	0.52%	0.07%	1.71%	28	6	-2.36%	0.01%	-1.88%	27	-9
New Mexico	-0.05%	0.00%	1.20%	23	-13	-2.15%	-0.13%	-1.54%	18	5
New York	0.01%	0.05%	1.21%	26	-13	-2.73%	-0.22%	-2.02%	14	-5
North Carolina	0.26%	-0.05%	1.57%	20	2	-2.45%	-0.12%	-1.85%	23	-8
North Dakota	1.35%	0.88%	1.73%	46	1	0.99%	1.45%	0.02%	48	0
Ohio	0.31%	0.01%	1.55%	24	1	-2.05%	0.02%	-1.58%	28	0
Oklahoma	0.28%	-0.03%	1.56%	21	2	-1.41%	-0.12%	-0.80%	20	21
Oregon	-0.38%	-0.26%	1.13%	12	-5	-2.39%	-0.17%	-1.74%	17	0
Pennsylvania	0.31%	0.15%	1.42%	33	-7	-2.74%	-0.56%	-1.70%	4	4
Rhode Island	0.13%	0.33%	1.06%	40	-22	-2.10%	0.17%	-1.78%	36	-9
South Carolina	0.69%	0.39%	1.55%	43	-5	-1.88%	0.43%	-1.83%	43	-10
South Dakota	0.77%	0.19%	1.84%	34	7	-2.00%	-0.07%	-1.45%	24	5
Tennessee	0.17%	-0.31%	1.74%	10	9	-2.88%	-0.56%	-1.83%	3	3
Texas	-1.02%	-1.10%	1.33%	2	0	-2.10%	-0.33%	-1.29%	10	16
Utah	-0.35%	-0.72%	1.63%	4	4	-2.68%	-0.70%	-1.49%	1	9
Vermont	0.62%	0.08%	1.80%	30	7	-2.48%	0.42%	-2.41%	41	-27
Virginia	0.20%	-0.13%	1.59%	16	4	-2.11%	0.16%	-1.79%	35	-10
Washington	0.11%	-0.06%	1.42%	19	-3	-2.42%	0.12%	-2.05%	31	-15
West Virginia	1.10%	0.96%	1.40%	47	-2	-1.25%	-0.21%	-0.55%	15	28
Wisconsin	0.36%	0.07%	1.54%	29	2	-1.69%	0.22%	-1.42%	37	0
Wyoming	1.37%	1.58%	1.04%	48	0	-0.04%	0.36%	0.08%	40	7
Statewide Average	0.25%		1.50%			-2.06%		-1.58%		

Table D.2A

## Energy Intensity Analysis Data for the Subperiod 1977–1988: Industrial, Commercial, and Residential Sectors

State	Industrial Sector					Commercial Sector					Residential Sector				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
Alabama	-2.25%	-0.93%	-0.96%	17	3	-1.27%	0.75%	-0.58%	37	-7	1.08%	0.39%	2.13%	33	7
Arizona	-5.66%	-1.13%	-4.18%	13	-10	-2.87%	-1.20%	-0.23%	7	7	0.23%	-0.39%	2.06%	11	12
Arkansas	-1.63%	0.43%	-1.71%	31	-7	-2.93%	-1.08%	-0.42%	10	3	-1.46%	-1.71%	1.69%	2	1
California	-4.01%	-0.61%	-3.04%	22	-13	-3.51%	-1.13%	-0.95%	9	-3	-1.11%	0.24%	0.10%	29	-25
Colorado	-4.86%	-1.69%	-2.82%	8	-1	0.31%	1.95%	-0.20%	46	-2	0.38%	0.03%	1.79%	26	6
Connecticut	-5.63%	-2.90%	-2.38%	3	1	-3.33%	0.04%	-1.93%	26	-17	0.42%	-0.35%	2.22%	13	20
Delaware	-2.21%	-1.60%	-0.25%	9	12	-7.01%	-1.73%	-3.84%	5	-4	1.33%	0.78%	1.99%	45	-1
Florida	-6.29%	-3.23%	-2.71%	2	-1	-1.32%	1.32%	-1.21%	41	-15	0.76%	0.60%	1.60%	41	-4
Georgia	-1.12%	0.51%	-1.27%	32	-3	-2.65%	-0.20%	-1.01%	21	-5	1.17%	0.44%	2.17%	35	6
Idaho	-0.18%	2.19%	-2.01%	42	-4	-1.40%	-0.70%	0.73%	13	12	-0.06%	0.45%	0.93%	36	-21
Illinois	-0.14%	2.52%	-2.31%	43	-4	-3.24%	-1.38%	-0.42%	6	4	0.09%	0.71%	0.83%	42	-23
Indiana	-1.14%	-0.50%	-0.28%	24	4	-1.12%	0.10%	0.22%	29	3	0.26%	0.28%	1.43%	30	-3
Iowa	1.92%	1.43%	0.85%	37	10	-1.74%	-1.14%	0.83%	8	14	-0.30%	-0.55%	1.69%	9	2
Kansas	-0.43%	0.92%	-1.00%	34	0	-0.71%	0.85%	-0.12%	38	1	-0.26%	-0.24%	1.42%	15	-3
Kentucky	-1.40%	0.13%	-1.18%	28	-1	-2.42%	-0.24%	-0.74%	20	-2	1.34%	0.96%	1.82%	47	-2
Louisiana	-2.15%	-1.22%	-0.58%	11	12	-2.61%	-0.62%	-0.55%	15	2	0.21%	0.18%	1.47%	27	-5
Maine	-0.54%	2.19%	-2.37%	41	-8	-1.26%	0.66%	-0.48%	32	-1	0.25%	-0.22%	1.92%	16	9
Maryland	-2.27%	-0.45%	-1.47%	25	-6	-4.08%	-2.37%	-0.27%	2	1	1.28%	0.72%	2.01%	43	0
Massachusetts	-5.23%	-2.42%	-2.45%	6	-1	-5.85%	-2.25%	-2.17%	3	-1	0.08%	-0.83%	2.35%	5	13
Michigan	-0.31%	0.77%	-0.73%	33	3	-0.91%	-0.12%	0.65%	23	13	-0.19%	-0.43%	1.68%	10	3
Minnesota	-1.45%	1.49%	-2.58%	38	-12	-1.58%	0.08%	-0.22%	27	-3	0.37%	-0.32%	2.13%	14	17
Mississippi	-0.13%	0.06%	0.17%	27	13	-1.31%	0.71%	-0.58%	36	-9	0.76%	0.01%	2.19%	25	11
Missouri	-2.96%	-1.13%	-1.47%	12	0	-2.07%	-0.39%	-0.25%	18	2	-0.62%	-0.77%	1.59%	6	0
Montana	1.13%	3.72%	-2.23%	46	0	-0.13%	0.38%	0.92%	31	11	-0.58%	-0.13%	0.99%	23	-15
Nebraska	-2.75%	-0.58%	-1.81%	23	-10	-1.02%	-0.04%	0.46%	25	9	0.33%	-0.17%	1.94%	19	11
Nevada	-2.15%	1.66%	-3.46%	40	-18	-3.57%	-2.50%	0.36%	1	4	-0.98%	-1.07%	1.53%	4	1

Table D.2A—Continued

State	Industrial Sector					Commercial Sector					Residential Sector				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
New Hampshire	-4.48%	0.03%	-4.15%	26	-18	-0.74%	2.21%	-1.51%	47	-9	0.52%	-0.15%	2.11%	20	15
New Jersey	-3.95%	-2.78%	-0.82%	4	6	-3.15%	-0.31%	-1.40%	19	-8	0.27%	-0.13%	1.85%	21	7
New Mexico	-1.48%	0.94%	-2.07%	35	-10	-0.07%	1.03%	0.34%	39	4	-0.58%	-0.77%	1.63%	7	0
New York	-5.20%	-2.72%	-2.12%	5	1	-3.45%	-1.01%	-1.00%	11	-4	0.44%	0.53%	1.35%	40	-6
North Carolina	-2.27%	-0.78%	-1.13%	20	-2	-0.26%	1.93%	-0.75%	45	-5	1.24%	0.22%	2.46%	28	14
North Dakota	10.79%	4.57%	6.58%	48	0	0.97%	1.50%	0.91%	43	3	0.90%	0.35%	1.99%	32	6
Ohio	-2.27%	-1.04%	-0.88%	15	2	-0.90%	0.35%	0.19%	30	7	0.01%	-0.13%	1.58%	22	-6
Oklahoma	-0.84%	-1.39%	0.90%	10	20	-0.21%	1.41%	-0.19%	42	-1	0.04%	0.53%	0.96%	39	-22
Oregon	0.55%	4.00%	-3.10%	47	-4	-1.30%	-0.15%	0.29%	22	6	-0.15%	0.43%	0.87%	34	-20
Pennsylvania	-2.58%	-0.84%	-1.38%	18	-2	-2.04%	-0.66%	0.06%	14	7	-0.43%	-0.72%	1.74%	8	2
Rhode Island	-5.88%	-4.39%	-1.14%	1	1	-3.07%	-0.51%	-1.12%	17	-5	1.06%	0.32%	2.18%	31	8
South Carolina	-0.77%	1.25%	-1.66%	36	-5	-3.41%	-0.59%	-1.39%	16	-8	1.60%	0.51%	2.53%	38	9
South Dakota	0.63%	-0.80%	1.78%	19	25	-2.31%	-0.99%	0.11%	12	7	0.24%	-0.21%	1.89%	17	7
Tennessee	-2.71%	-0.65%	-1.70%	21	-7	-3.86%	-1.89%	-0.53%	4	0	0.14%	-0.21%	1.79%	18	3
Texas	-0.32%	-1.05%	1.09%	14	21	-0.99%	0.70%	-0.25%	35	0	0.12%	0.46%	1.11%	37	-17
Utah	-3.52%	-0.95%	-2.22%	16	-5	-1.11%	0.09%	0.24%	28	5	-2.65%	-2.04%	0.84%	1	0
Vermont	-2.65%	0.37%	-2.66%	30	-15	-2.80%	0.67%	-2.03%	33	-18	-1.77%	-1.52%	1.19%	3	-1
Virginia	-0.27%	0.26%	-0.18%	29	8	-1.63%	0.68%	-0.88%	34	-11	1.57%	0.73%	2.28%	44	2
Washington	-0.66%	2.89%	-3.19%	44	-12	0.52%	1.74%	0.21%	44	1	-0.50%	0.91%	0.04%	46	-37
West Virginia	-0.04%	-1.75%	2.06%	7	34	1.17%	1.14%	1.47%	40	7	0.29%	-0.36%	2.10%	12	17
Wisconsin	0.29%	1.64%	-0.99%	39	3	-1.30%	-0.10%	0.24%	24	5	0.25%	-0.02%	1.71%	24	2
Wyoming	0.79%	3.55%	-2.40%	45	0	3.15%	2.99%	1.60%	48	0	2.32%	2.64%	1.12%	48	0
Statewide Average	-1.68%	0.00%	-1.33%			-1.80%	0.00%	-0.36%			0.20%	0.00%	1.65%		

Table D.2B

## Energy Intensity Analysis Data for the Subperiod 1977–1988: Transportation Sector and Total Aggregate

State	Transportation Sector					Total Aggregate Energy Intensity				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
Alabama	-2.54%	-2.20%	1.71%	1	0	-2.71%	-0.34%	-2.13%	16	3
Arizona	-1.03%	-1.38%	2.40%	2	3	-3.67%	-0.38%	-3.05%	14	-6
Arkansas	-0.37%	-0.36%	2.02%	14	3	-2.83%	-0.61%	-1.98%	11	5
California	-0.39%	-0.45%	2.11%	12	4	-3.54%	-0.26%	-3.04%	20	-11
Colorado	-0.95%	-0.82%	1.92%	4	2	-2.82%	-0.13%	-2.45%	23	-6
Connecticut	0.05%	-0.23%	2.32%	17	9	-4.49%	0.36%	-4.61%	36	-32
Delaware	0.80%	0.54%	2.31%	40	6	-4.05%	-1.24%	-2.56%	1	5
Florida	0.12%	-0.09%	2.26%	23	7	-3.11%	-0.05%	-2.82%	27	-14
Georgia	0.60%	-0.05%	2.69%	24	20	-2.44%	0.84%	-3.04%	44	-22
Idaho	-1.54%	-0.53%	1.03%	8	-5	-1.46%	-0.06%	-1.16%	26	11
Illinois	-0.49%	0.05%	1.51%	30	-17	-2.74%	-0.31%	-2.19%	17	1
Indiana	0.36%	0.25%	2.14%	35	3	-1.54%	-0.63%	-0.67%	9	27
Iowa	-0.57%	0.03%	1.44%	29	-18	-0.50%	0.14%	-0.40%	31	15
Kansas	-0.19%	-0.03%	1.88%	25	-3	-1.56%	0.80%	-2.12%	43	-8
Kentucky	1.31%	1.49%	1.86%	48	-1	-1.62%	-0.24%	-1.13%	21	12
Louisiana	0.12%	1.05%	1.11%	43	-12	-2.33%	-0.79%	-1.30%	5	21
Maine	1.54%	1.23%	2.35%	45	3	-2.61%	1.28%	-3.65%	46	-26
Maryland	-0.26%	-0.65%	2.43%	5	15	-3.22%	0.13%	-3.11%	30	-19
Massachusetts	0.47%	-0.38%	2.89%	13	29	-5.39%	-0.65%	-4.51%	8	-7
Michigan	-0.57%	-0.53%	1.99%	9	1	-1.24%	-0.07%	-0.93%	24	16
Minnesota	-0.17%	-0.14%	2.01%	19	4	-2.26%	0.39%	-2.40%	38	-10
Mississippi	0.79%	1.29%	1.54%	46	-1	-0.78%	0.34%	-0.89%	35	10
Missouri	0.05%	-0.02%	2.11%	26	1	-2.43%	-0.35%	-1.84%	15	8
Montana	-0.51%	0.46%	1.07%	39	-27	-0.85%	0.60%	-1.21%	40	3
Nebraska	-0.48%	-0.27%	1.83%	15	-1	-2.07%	-0.14%	-1.69%	22	8
Nevada	-0.78%	-0.11%	1.37%	22	-15	-2.88%	-0.53%	-2.11%	12	3

Table D.2B—Continued

State	Transportation Sector					Total Aggregate Energy Intensity				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
New Hampshire	0.27%	-0.52%	2.83%	10	24	-5.02%	0.33%	-5.10%	33	-31
New Jersey	0.46%	-0.59%	3.08%	6	35	-3.20%	0.38%	-3.34%	37	-25
New Mexico	-0.31%	0.13%	1.59%	32	-14	-1.61%	0.09%	-1.46%	29	5
New York	-0.44%	-0.52%	2.12%	11	4	-4.56%	-0.93%	-3.39%	2	1
North Carolina	0.45%	0.23%	2.26%	34	6	-2.25%	0.42%	-2.43%	39	-10
North Dakota	0.10%	1.00%	1.15%	42	-14	3.27%	1.97%	1.54%	48	0
Ohio	-0.25%	0.03%	1.76%	28	-7	-2.31%	-0.48%	-1.59%	13	14
Oklahoma	-0.64%	-0.13%	1.53%	21	-13	-1.35%	-0.63%	-0.48%	10	29
Oregon	0.29%	0.71%	1.62%	41	-5	-0.79%	0.65%	-1.20%	41	3
Pennsylvania	-0.02%	0.00%	2.02%	27	-3	-3.01%	-0.71%	-2.06%	6	8
Rhode Island	0.35%	0.43%	1.96%	38	-1	-4.03%	-0.30%	-3.49%	18	-11
South Carolina	0.28%	0.29%	2.03%	37	-2	-2.34%	0.67%	-2.77%	42	-18
South Dakota	-0.58%	-0.14%	1.60%	20	-11	-1.76%	0.01%	-1.53%	28	3
Tennessee	0.11%	0.19%	1.97%	33	-4	-3.50%	-0.27%	-2.99%	19	-9
Texas	-1.78%	-1.20%	1.45%	3	-1	-1.63%	-0.87%	-0.52%	4	28
Utah	-1.19%	-0.57%	1.42%	7	-3	-2.57%	-0.67%	-1.66%	7	14
Vermont	0.37%	-0.26%	2.67%	16	23	-4.30%	-0.06%	-4.00%	25	-20
Virginia	0.17%	-0.18%	2.39%	18	14	-2.34%	0.28%	-2.38%	32	-7
Washington	0.55%	0.27%	2.32%	36	7	-1.22%	1.50%	-2.48%	47	-6
West Virginia	0.23%	1.22%	1.05%	44	-11	-0.95%	-0.90%	0.19%	3	39
Wisconsin	-0.30%	0.12%	1.62%	31	-12	-1.39%	0.34%	-1.50%	34	4
Wyoming	0.02%	1.33%	0.73%	47	-22	0.10%	1.06%	-0.72%	45	2
Statewide Average	-0.13%		1.91%			-2.33%		-2.09%		

Table D.3A

## Energy Intensity Analysis Data for the Subperiod 1988–1999: Industrial, Commercial, and Residential Sectors

State	Industrial Sector					Commercial Sector					Residential Sector				
	Raw Energy Intensity Average %	Residual Average %	Variate Average %	Residual Ranking	Move-ment	Raw Energy Intensity Average %	Residual Average %	Variate Average %	Residual Ranking	Move-ment	Raw Energy Intensity Average %	Residual Average %	Variate Average %	Residual Ranking	Move-ment
Alabama	0.36%	-0.20%	2.15%	20	11	-0.30%	1.57%	-0.97%	45	1	0.23%	-0.12%	1.12%	20	16
Arizona	-2.84%	-1.42%	0.17%	8	-4	-2.73%	-0.95%	-0.87%	6	5	-0.22%	0.32%	0.24%	37	-17
Arkansas	3.44%	1.68%	3.34%	43	4	-2.01%	0.21%	-1.32%	35	-11	0.52%	0.54%	0.76%	44	-1
California	1.10%	0.70%	1.98%	33	5	-2.95%	-1.02%	-1.02%	5	3	-1.00%	-0.19%	-0.04%	18	-17
Colorado	0.43%	1.50%	0.52%	40	-7	-3.68%	-1.36%	-1.42%	2	0	-0.04%	0.39%	0.34%	39	-13
Connecticut	0.06%	-0.05%	1.70%	22	7	-2.40%	-0.17%	-1.32%	25	-9	0.24%	0.22%	0.79%	32	5
Delaware	1.98%	2.16%	1.41%	46	-4	-2.77%	2.53%	-4.39%	46	-36	-0.21%	-0.25%	0.81%	16	6
Florida	2.58%	2.04%	2.13%	45	-1	-2.15%	-0.56%	-0.69%	16	6	0.11%	0.65%	0.23%	46	-13
Georgia	-0.34%	-1.22%	2.46%	10	12	-2.16%	0.00%	-1.26%	29	-8	-0.28%	0.10%	0.40%	29	-12
Idaho	-2.71%	-0.51%	-0.61%	19	-14	-2.20%	-0.74%	-0.56%	12	8	0.25%	0.79%	0.24%	48	-10
Illinois	-1.74%	-1.35%	1.20%	9	2	-2.43%	-0.77%	-0.75%	11	4	-0.22%	-0.31%	0.87%	14	7
Indiana	-1.95%	0.21%	-0.57%	26	-17	-1.85%	-0.26%	-0.69%	22	5	0.03%	-0.16%	0.97%	19	10
Iowa	0.69%	0.23%	2.05%	27	8	-1.61%	0.13%	-0.84%	32	-1	0.16%	0.42%	0.51%	40	-6
Kansas	-1.41%	-0.01%	0.19%	23	-9	-2.55%	-0.38%	-1.27%	20	-8	0.00%	0.03%	0.75%	24	4
Kentucky	0.03%	0.00%	1.62%	24	3	-1.28%	0.60%	-0.98%	40	0	0.31%	0.03%	1.05%	25	16
Louisiana	-0.07%	0.26%	1.26%	28	-2	-2.40%	-0.69%	-0.80%	13	4	0.47%	0.23%	1.01%	34	8
Maine	2.55%	1.35%	2.79%	38	5	-1.33%	0.37%	-0.80%	38	0	0.53%	0.59%	0.71%	45	-1
Maryland	-4.59%	-4.75%	1.75%	1	2	2.08%	3.59%	-0.60%	48	0	-0.30%	-0.29%	0.76%	15	-1
Massachusetts	2.67%	1.38%	2.88%	39	7	-3.21%	-0.92%	-1.39%	8	-5	-0.40%	-0.66%	1.04%	2	5
Michigan	-0.18%	-0.63%	2.04%	18	6	-1.27%	1.05%	-1.42%	43	-2	-0.01%	0.00%	0.76%	23	4
Minnesota	0.99%	1.55%	1.03%	41	-4	-2.44%	-0.25%	-1.28%	23	-9	0.05%	0.09%	0.73%	28	3
Mississippi	0.95%	1.12%	1.42%	37	-1	-0.77%	0.89%	-0.76%	42	1	0.61%	0.44%	0.94%	42	3
Missouri	-0.49%	-0.74%	1.84%	17	3	-1.75%	-0.09%	-0.76%	26	2	0.18%	0.03%	0.92%	26	9
Montana	1.46%	1.71%	1.34%	44	-4	-3.15%	-1.64%	-0.61%	1	4	-0.18%	0.12%	0.48%	30	-7
Nebraska	-0.17%	0.93%	0.48%	36	-11	-3.15%	-1.19%	-1.06%	3	1	-0.11%	0.07%	0.59%	27	-3
Nevada	0.14%	2.97%	-1.25%	47	-17	-3.14%	-0.41%	-1.83%	19	-13	-0.75%	0.22%	-0.20%	33	-31

Table D.3A—Continued

State	Industrial Sector					Commercial Sector					Residential Sector				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Movement	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Movement	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Movement
New Hampshire	-1.47%	-0.84%	0.95%	15	-2	-1.42%	1.16%	-1.68%	44	-9	-0.60%	-0.38%	0.56%	9	-6
New Jersey	1.81%	0.66%	2.74%	32	9	-1.85%	-0.01%	-0.93%	27	-1	-0.44%	-0.34%	0.67%	13	-7
New Mexico	-4.78%	-1.76%	-1.43%	6	-4	-1.87%	-0.79%	-0.17%	10	15	0.27%	0.39%	0.66%	38	2
New York	2.62%	1.64%	2.57%	42	3	-1.18%	0.33%	-0.61%	37	5	-0.09%	0.20%	0.49%	31	-6
North Carolina	-1.91%	-0.91%	0.59%	14	-4	-2.47%	-0.92%	-0.65%	7	6	-0.44%	-0.50%	0.84%	5	0
North Dakota	1.22%	-1.19%	4.00%	11	28	-0.56%	0.68%	-0.34%	41	4	0.86%	0.68%	0.95%	47	1
Ohio	-0.31%	0.15%	1.14%	25	-2	-2.39%	-0.19%	-1.30%	24	-6	-0.31%	-0.36%	0.83%	11	1
Oklahoma	-1.70%	0.61%	-0.72%	31	-19	-1.44%	-0.49%	-0.06%	18	16	0.26%	0.45%	0.58%	43	-4
Oregon	-6.30%	-2.20%	-2.52%	4	-3	-2.77%	-0.83%	-1.04%	9	0	-0.33%	-0.01%	0.46%	22	-12
Pennsylvania	-2.32%	-1.95%	1.22%	5	3	-1.73%	0.14%	-0.96%	33	-4	-0.26%	-0.43%	0.94%	8	10
Rhode Island	8.25%	5.03%	4.81%	48	0	-2.26%	-0.49%	-0.87%	17	2	-0.30%	-0.45%	0.92%	6	9
South Carolina	-0.48%	0.26%	0.84%	29	-8	-1.30%	0.20%	-0.59%	34	5	0.04%	-0.60%	1.41%	4	26
South Dakota	-2.42%	-3.34%	2.51%	2	4	-1.34%	0.43%	-0.87%	39	-2	-0.38%	-0.36%	0.76%	10	-2
Tennessee	-2.36%	-2.66%	1.88%	3	4	1.04%	3.37%	-1.43%	47	0	-0.30%	-0.36%	0.83%	12	1
Texas	-0.90%	0.90%	-0.21%	35	-17	-3.11%	-0.58%	-1.63%	14	-7	-0.30%	-0.06%	0.53%	21	-5
Utah	-0.53%	-1.05%	2.11%	12	7	-2.02%	0.07%	-1.19%	30	-7	0.09%	0.25%	0.61%	35	-3
Vermont	0.58%	0.83%	1.33%	34	0	-1.42%	-0.27%	-0.25%	21	15	0.75%	0.43%	1.10%	41	6
Virginia	0.38%	0.49%	1.48%	30	2	-1.66%	0.09%	-0.86%	31	-1	-0.35%	-0.65%	1.07%	3	6
Washington	-1.36%	-0.10%	0.33%	21	-6	-4.00%	-1.15%	-1.94%	4	-3	-0.56%	-0.44%	0.66%	7	-3
West Virginia	-0.97%	-1.69%	2.31%	7	10	-0.70%	-0.01%	0.21%	28	16	0.72%	0.28%	1.21%	36	10
Wisconsin	-1.03%	-0.82%	1.38%	16	0	-1.57%	0.30%	-0.97%	36	-4	-0.25%	-0.25%	0.77%	17	2
Wyoming	0.04%	-0.97%	2.60%	13	15	-1.54%	-0.57%	-0.07%	15	18	-0.33%	-0.79%	1.24%	1	10
Statewide Average	-0.23%		1.36%			-1.90%		-1.00%			-0.05%		0.73%		

Table D.3B

## Energy Intensity Analysis Data for the Subperiod 1988–1999: Transportation Sector and Total Aggregate

State	Transportation Sector					Total Aggregate Energy Intensity				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
Alabama	0.15%	-0.95%	1.55%	4	7	-1.06%	0.44%	-0.75%	40	-3
Arizona	0.23%	-0.06%	0.75%	20	-7	-2.24%	-0.71%	-0.78%	4	5
Arkansas	1.33%	-0.05%	1.83%	21	13	0.44%	1.57%	-0.39%	48	0
California	-0.79%	-0.48%	0.14%	12	-10	-1.68%	-0.45%	-0.49%	12	15
Colorado	0.52%	-0.50%	1.47%	11	10	-2.54%	0.09%	-1.89%	28	-24
Connecticut	0.57%	0.80%	0.22%	44	-22	-1.91%	0.04%	-1.20%	27	-7
Delaware	-0.07%	-0.46%	0.84%	13	-5	-2.54%	0.42%	-2.22%	39	-34
Florida	-0.11%	-0.70%	1.04%	10	-3	-1.40%	-0.55%	-0.10%	10	21
Georgia	0.83%	0.14%	1.14%	27	-3	-2.12%	-0.38%	-0.99%	15	-4
Idaho	1.78%	0.59%	1.64%	40	2	-2.05%	-0.09%	-1.22%	23	-8
Illinois	1.17%	0.26%	1.35%	33	-2	-2.09%	-0.54%	-0.81%	11	2
Indiana	1.09%	-0.04%	1.58%	22	7	-2.08%	-0.13%	-1.21%	18	-4
Iowa	1.37%	-0.25%	2.07%	16	19	-1.03%	0.71%	-1.00%	44	-4
Kansas	-0.32%	-1.20%	1.33%	2	2	-2.32%	-0.74%	-0.83%	3	4
Kentucky	1.13%	-0.23%	1.81%	17	13	-1.12%	0.32%	-0.70%	37	-4
Louisiana	0.40%	-1.50%	2.34%	1	15	-1.03%	0.10%	-0.39%	29	10
Maine	0.27%	-0.37%	1.09%	14	0	-0.57%	0.26%	-0.09%	33	10
Maryland	0.43%	0.22%	0.66%	31	-14	-2.00%	-0.57%	-0.69%	9	7
Massachusetts	0.33%	0.28%	0.49%	34	-19	-1.87%	-0.12%	-1.00%	22	-1
Michigan	1.52%	0.41%	1.56%	37	1	-1.11%	-0.30%	-0.06%	16	19
Minnesota	1.85%	0.74%	1.56%	42	1	-1.12%	1.08%	-1.45%	46	-12
Mississippi	1.95%	0.44%	1.96%	38	6	-0.44%	1.12%	-0.82%	47	-3
Missouri	1.59%	0.77%	1.27%	43	-4	-1.06%	0.60%	-0.92%	43	-5
Montana	1.28%	0.07%	1.66%	25	8	-0.67%	-0.12%	0.19%	21	21
Nebraska	1.71%	0.24%	1.91%	32	8	-1.73%	-0.01%	-0.98%	25	0
Nevada	-1.03%	-0.80%	0.22%	6	-5	-1.95%	-0.05%	-1.16%	24	-6

Table D.3B—Continued

State	Transportation Sector					Total Aggregate Energy Intensity				
	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment	Raw Energy Intensity Average % Change	Residual Average % Change	Variate Average % Change	Residual Ranking	Move-ment
New Hampshire	1.27%	1.08%	0.63%	47	-15	-1.92%	-0.13%	-1.05%	19	0
New Jersey	0.18%	0.12%	0.51%	26	-14	-2.00%	-0.59%	-0.66%	8	9
New Mexico	0.88%	0.14%	1.18%	28	-2	-2.14%	-0.25%	-1.15%	17	-7
New York	-0.12%	-0.18%	0.51%	18	-12	-1.08%	0.30%	-0.64%	36	0
North Carolina	0.43%	-0.32%	1.20%	15	3	-2.65%	-0.70%	-1.20%	5	-2
North Dakota	2.56%	0.88%	2.13%	46	1	-0.44%	0.55%	-0.25%	42	3
Ohio	0.95%	-0.09%	1.49%	19	8	-1.59%	0.30%	-1.14%	35	-7
Oklahoma	1.44%	0.15%	1.74%	29	7	-1.52%	0.24%	-1.02%	32	-3
Oregon	-0.55%	-1.02%	0.92%	3	0	-3.84%	-0.83%	-2.26%	2	-1
Pennsylvania	0.85%	0.21%	1.09%	30	-5	-2.30%	-0.43%	-1.12%	14	-6
Rhode Island	-0.06%	0.05%	0.34%	24	-15	-0.39%	0.42%	-0.07%	38	8
South Carolina	1.78%	0.83%	1.40%	45	-4	-1.42%	0.19%	-0.87%	31	-1
South Dakota	2.11%	0.46%	2.09%	39	6	-1.77%	-0.12%	-0.90%	20	4
Tennessee	0.48%	-0.79%	1.72%	8	12	-2.12%	-0.69%	-0.68%	6	6
Texas	0.03%	-0.95%	1.43%	5	5	-2.38%	0.27%	-1.91%	34	-28
Utah	0.74%	-0.80%	1.99%	7	16	-1.81%	-0.45%	-0.61%	13	10
Vermont	1.03%	0.39%	1.09%	36	-8	-0.85%	0.87%	-0.97%	45	-4
Virginia	0.47%	0.03%	0.89%	23	-4	-1.81%	0.01%	-1.08%	26	-4
Washington	-0.29%	-0.73%	0.89%	9	-4	-3.27%	-0.89%	-1.64%	1	1
West Virginia	2.18%	0.71%	1.92%	41	5	-1.28%	0.48%	-1.01%	41	-9
Wisconsin	1.47%	0.32%	1.60%	35	2	-1.69%	0.12%	-1.06%	30	-4
Wyoming	3.39%	2.12%	1.72%	48	0	-0.11%	-0.63%	1.26%	7	40
Statewide Average	0.84%		1.29%			-1.62%		-0.87%		