

## **THE CALM BEFORE THE STORM?**

### ***EPA Data Shows Greenhouse Gas Emissions Down Slightly, But Coal-Fired Power Plants Will Make CO<sub>2</sub> Reduction Goals Harder to Reach***

**An Analysis by the Environmental Integrity Project  
April 2009**

Carbon dioxide (CO<sub>2</sub>) emissions from U.S. power plants dropped approximately 3 percent in 2008, tempering a steady increasing trend in recent years. In contrast to the one-year decline in emissions, power plant CO<sub>2</sub> emissions have risen nearly one percent since 2003, and approximately 4.7 percent since 1998, according to new data from the U.S. Environmental Protection Agency.

The overwhelming consensus of the world's scientific community is that urgent measures are needed to reduce greenhouse gas emissions by about 80 percent over the next four decades.<sup>1</sup> The Obama Administration has proposed a plan to reduce emissions by 83 percent (from 2005 levels) by 2050, through cap-and-trade legislation. The Administration has proposed an interim short-term goal of a 14 percent reduction in emissions by 2020.<sup>2</sup>

This data may be helpful as policymakers identify the states and specific power plants that warrant heightened attention as the nation grapples with the shift to a carbon-constrained energy future.

The EPA's data allow easy identification of states that release the most carbon dioxide from electricity generation, as well as states that have registered the greatest increases in emissions over the past decade. *See*, Appendices A and B. The data also show which plants emit the most CO<sub>2</sub> relative to the amount of electricity they generate. *See*, Appendix C.

The drop in CO<sub>2</sub> emissions in 2008 is primarily attributable to a drop in electric generation – gross electric output was down approximately 3.2 percent in 2008, as compared to 2007, according to the EPA data. The economy and the weather are two key factors that affect electric generation and CO<sub>2</sub> emissions from year to year. Other factors, including the rising demand for electricity and the growth of generation by both existing and new fossil-fired power plants over the past decade, may make it increasingly difficult to make needed long-term reductions and reverse the rising emissions trend. The U.S. Department of Energy predicts that carbon dioxide emissions from power generation will increase 15 percent between 2009 and 2030, due to new or expanded coal-fired power plants.<sup>3</sup> According to the National Energy Technology Laboratory, an additional 1,392 megawatts of new coal-fired generating capacity was added in 2008, and another 26,131 megawatts have been permitted.<sup>4</sup>

#### ***The States That Emitted the Most Power Plant CO<sub>2</sub>***

The ten states that emitted the most CO<sub>2</sub> in 2008, measured in total tons, are listed in the table below. These states are: Texas, Ohio, Indiana, Florida, Pennsylvania, Illinois, Kentucky, Georgia, Alabama, and West Virginia.

Rank	State	Tons of CO <sub>2</sub> (2008)
1	TX	261,049,175
2	OH	133,008,509
3	IN	131,041,343
4	FL	123,214,351
5	PA	116,556,148
6	IL	110,246,121
7	KY	101,394,048
8	GA	94,130,740
9	AL	89,415,249
10	WV	88,261,067

The ten states with the largest increase in CO<sub>2</sub> emissions between 2007 and 2008, measured in total tons, are listed in the table below. Oklahoma's increase in CO<sub>2</sub> emissions is primarily attributable to ramped up generation at three power plants: Muskogee units 4 & 5 (coal), Sooner units 1 & 2 (coal) and Northeastern units 3314 (coal) & 3302 (natural gas) accounted for the vast majority of Oklahoma's reported CO<sub>2</sub> increase. Combined, the units increased their CO<sub>2</sub> emissions 4,286,131 tons from 2007 levels.

Rank	State	Tons of CO <sub>2</sub> - 1-Year Increase (2007 to 2008)
1	OK	3,119,141
2	IA	1,812,743
3	TX	1,733,027
4	NE	1,318,297
5	IL	1,112,161
6	WA	1,098,461
7	SD	994,163
8	RI	875,306
9	NV	713,664
10	WY	704,066

The ten states with the largest increases in CO<sub>2</sub> emissions over the last five years (from 2003 to 2008) are listed in the table below.

Rank	State	Tons of CO <sub>2</sub> - 5-Year Increase (2003 to 2008)
1	AZ	12,300,469
2	CA	11,138,018
3	GA	11,099,841
4	TX	10,492,883
5	IL	8,606,731
6	IA	5,776,111
7	KY	5,621,987
8	OK	4,072,459
9	NC	3,801,115
10	MS	3,285,426

The ten states with the largest CO<sub>2</sub> increases over the past ten years (from 1998 to 2008) are listed in the table below.

Rank	State	Tons of CO <sub>2</sub> - 10-Year Increase (1998 to 2008)
1	TX	26,875,486
2	AZ	22,647,578
3	CA	18,776,763
4	GA	17,692,266
5	IL	17,680,625
6	OK	16,594,064
7	AL	8,858,029
8	SC	7,517,373
9	CO	6,657,513
10	IA	6,024,856

Based on the new 2008 EPA data, the ten states that emitted the most CO<sub>2</sub> per megawatt-hour of electricity produced are: Vermont (although Vermont makes the list because the state has only one plant, which burns primarily wood, reporting to the EPA's Acid Rain database),<sup>5</sup> North Dakota, North Carolina, Michigan, Montana, Wyoming, Minnesota, Kentucky, Iowa and South Dakota.<sup>6</sup>

Rank	State	Tons of CO <sub>2</sub> per MWh	MWh (Gross Load)	Tons of CO <sub>2</sub>
1	VT	1.5478	284,357	440,117
2	ND	1.1617	30,212,177	35,096,897
3	NC	1.1188	67,644,206	75,678,980
4	MI	1.1167	68,003,367	75,940,512
5	MT	1.1067	19,671,641	21,770,385
6	WY	1.0839	46,735,768	50,658,163
7	MN	1.0750	35,359,820	38,012,630
8	KY	1.0738	94,428,229	101,394,048
9	IA	1.0720	42,667,235	45,738,556
10	SD	1.0649	3,977,013	4,235,164

### *Source of the Data*

Reported CO<sub>2</sub> emissions and reported gross electric generation (load) were obtained from the U.S. Environmental Protection Agency “Clean Air Markets” webpage. The database is a publicly accessible repository for emissions and other operational data self-reported by the utility industry, and includes more than 1,000 power plants regulated under the federal Clean Air Act’s Acid Rain Program. Additional information on these regulatory programs and the database can be found on EPA’s Clean Air Markets web page at <http://www.epa.gov/airmarkets/>. Data for all 50 states may be found in Appendix D.

### *Increased Efficiency the Key to Short-term Reductions in Carbon Dioxide*

Power plant CO<sub>2</sub> emissions are directly linked to the efficiency with which fossil fuels are converted into electricity, and coal-fired power plants are inherently inefficient. A typical power plant converts only about a third of the energy contained in coal into electricity, while the remainder is emitted as waste heat.<sup>7</sup> In fact, coal-fired power plant efficiency has remained largely unchanged since the mid 1960’s.

The nation’s oldest and dirtiest power plants need to be retired, and replaced with cleaner sources of energy. That will require accelerating the development of wind power and other renewable sources of electricity. In the short-term, the quickest route to greenhouse gas reductions is reducing demand for energy. That means smarter building codes, and supporting initiatives – such as the weatherization of low-income homes and appliance efficiency standards – to reduce demand and yield greenhouse gas benefits.

We clearly cannot afford a wave of conventional fossil-fired power plants that would only add tens of millions of tons of carbon dioxide to the atmosphere every year over the lifetimes of these new plants. Carbon capture and sequestration (removing and storing the carbon either before or after the fuel is burned and storing the carbon underground) may have potential, but has not yet been shown to be economically or technically viable on a large scale. While some of the nation’s least efficient and most polluting plants will need to be retired, existing fossil-fired plants will need to be retrofitted to capture CO<sub>2</sub> before it is emitted into the

atmosphere. Power plants will need to improve their efficiency, e.g., by capturing and using some of the heat that is now wasted in the combustion process.

If the United States is serious about curbing greenhouse gas pollution and meeting the goals that the scientific community says are needed, then many of the nation's dirtiest power plants will either need to be cleaned up or retired. We have no time to lose.

## Endnotes

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<sup>1</sup> Gupta, S., D. A. Tirpak, N. Burger, J. Gupta, N. Höhne, A. I. Boncheva, G. M. Kanoan, C. Kolstad, J. A. Kruger, A. Michaelowa, S. Murase, J. Pershing, T. Saijo, A. Sari, 2007: Policies, Instruments and Co-operative Arrangements. In *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter13.pdf>.

<sup>2</sup> John Heilprin "Buoyed by US, UN chief sees climate deal this year," MSNBC, Mar. 12, 2009. Available at <http://www.msnbc.msn.com/id/29657533/>.

<sup>3</sup> Energy Info. Admin., U.S. Dep't of Energy, U.S. Data Projections, Forecast & Analyses: Carbon Dioxide Emissions by Sector and Source tbl. 18 (March 2008). Available at [http://www.eia.doe.gov/oiaf/aeo/excel/aeotab\\_18.xls](http://www.eia.doe.gov/oiaf/aeo/excel/aeotab_18.xls).

<sup>4</sup> U.S. Department of Energy, National Energy Technology Laboratory, Office of Systems Analyses and Planning, *Tracking New Coal-Fired Power Plants* (January 5, 2009), by Erik Shuster. Available at <http://204.154.137.14/coal/refshelf/ncp.pdf>.

<sup>5</sup> Vermont's J. C. McNeil power plant is the only Vermont facility that reported emissions to U.S. EPA's Acid Rain database in 2008. The McNeil plant is primarily wood-fired, although it also reported diesel oil and natural gas combustion in 2008.

<sup>6</sup> EIP derived "Tons of CO<sub>2</sub> per MWh" by dividing "Total Tons of CO<sub>2</sub>" by "Total MWh (Gross Load)". Some facilities did not report any CO<sub>2</sub> emissions and/or gross load (i.e., electric generation). Facilities that failed to report emissions or electric generation were excluded from this analysis.

<sup>7</sup> See, U.S. Dep't of Energy & U.S. Env't Prot. Agency, *Carbon Dioxide Emissions from the Generation of Electric Power in the United States* (July 2000). Available at [http://www.eia.doe.gov/cneaf/electricity/page/co2\\_report/co2report.html](http://www.eia.doe.gov/cneaf/electricity/page/co2_report/co2report.html).

**APPENDIX A - POWER PLANT CO<sub>2</sub>  
EMISSIONS BY STATE**

<b>State</b>	<b>Tons of CO<sub>2</sub> - 2008</b>	<b>2008 Ranking</b>
TX	261,049,175	1
OH	133,008,509	2
IN	131,041,343	3
FL	123,214,351	4
PA	116,556,148	5
IL	110,246,121	6
KY	101,394,048	7
GA	94,130,740	8
AL	89,415,249	9
WV	88,261,067	10
MI	75,940,512	11
NC	75,678,980	12
MO	74,803,304	13
AZ	66,277,581	14
TN	59,717,649	15
OK	54,754,454	16
WY	50,658,163	17
WI	49,953,119	18
LA	47,245,278	19
IA	45,738,556	20
CO	45,233,707	21
SC	43,299,661	22
CA	42,464,346	23
NY	42,235,447	24
KS	40,464,397	25
UT	38,041,454	26
MN	38,012,630	27
ND	35,096,897	28
VA	34,174,298	29
NM	32,827,511	30
AR	32,250,348	31
MS	29,503,601	32
MD	27,311,068	33
NE	24,780,150	34
MT	21,770,385	35
MA	20,724,245	36
NV	17,763,481	37
NJ	14,063,521	38

**APPENDIX A - POWER PLANT CO<sub>2</sub>  
EMISSIONS BY STATE**

<b>State</b>	<b>Tons of CO<sub>2</sub> - 2008</b>	<b>2008 Ranking</b>
WA	13,864,916	39
OR	10,958,004	40
NH	7,530,388	41
CT	7,025,897	42
DE	6,145,756	43
SD	4,235,164	44
ME	3,607,536	45
RI	3,292,518	46
ID	722,128	47
VT	440,117	48
DC	54,231	49

**APPENDIX B - STATES WITH GREATEST POWER  
PLANT CO<sub>2</sub> INCREASE IN PAST DECADE**

<b>State</b>	<b>10-Year CO<sub>2</sub> Increase 1998 to 2008</b>	<b>Ranking</b>
TX	26,875,486	1
AZ	22,647,578	2
CA	18,776,763	3
GA	17,692,266	4
IL	17,680,625	5
OK	16,594,064	6
AL	8,858,029	7
SC	7,517,373	8
CO	6,657,513	9
IA	6,024,856	10
MS	5,871,397	11
OR	4,784,940	12
KS	4,543,000	13
NJ	4,522,541	14
LA	3,064,743	15
AR	2,760,045	16
KY	2,403,396	17
NE	2,376,706	18
WA	2,244,572	19
MO	2,087,934	20
NC	2,056,675	21
MT	1,945,329	22
NH	1,899,262	23
ME	1,868,212	24
RI	1,805,177	25
TN	1,722,338	26
MN	1,097,034	27
SD	564,450	28
ID	546,324	29
VT	193,333	30
DC	-204,231	31
UT	-329,721	32
DE	-520,017	33
PA	-570,076	34
WI	-1,701,405	35
NM	-2,545,380	36
ND	-3,127,770	37
NV	-3,566,924	38



**APPENDIX B - STATES WITH GREATEST POWER  
PLANT CO<sub>2</sub> INCREASE IN PAST DECADE**

<b>State</b>	<b>10-Year CO<sub>2</sub> Increase 1998 to 2008</b>	<b>Ranking</b>
VA	-3,813,104	39
CT	-3,858,268	40
WY	-4,211,515	41
WV	-4,360,962	42
MI	-5,126,981	43
OH	-5,773,826	44
IN	-6,304,612	45
MA	-6,712,019	46
MD	-9,236,974	47
FL	-9,844,333	48
NY	-14,993,252	49

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
TX	Hidalgo	Frontera Generation Facility	6.7106	1,193,080	8,006,226
NC	Person	Roxboro	2.1854	6,841,009	14,950,198
PA	Northumberland	Mt. Carmel Cogeneration	1.7537	277,311	486,321
KY	Muhlenberg	Paradise	1.6852	9,322,228	15,709,682
PA	Schuylkill	WPS Westwood Generation, LLC	1.6791	236,002	396,268
VT	Chittenden	J C McNeil	1.5478	284,357	440,117
MI	Hillsdale	Endicott Generating	1.5437	393,053	606,751
MN	Swift	Fibrominn Biomass Power Plant	1.5309	377,205	577,457
WI	Ashland	Bay Front	1.5082	348,934	526,247
IN	Warrick	F B Culley Generating Station	1.5029	2,065,613	3,104,424
OH	Lucas	Bay Shore	1.4832	3,374,888	5,005,554
MI	Ottawa	James De Young	1.4713	122,879	180,791
MT	Richland	Lewis & Clark	1.3877	360,200	499,856
IL	Morgan	Meredosia	1.3814	1,291,406	1,783,975
MI	Marquette	Shiras	1.3799	307,933	424,931
KY	Mason	H L Spurlock	1.3729	5,380,512	7,387,097
IA	Dubuque	Dubuque	1.3680	297,750	407,321
PA	Luzerne	Hunlock Power Station	1.3571	284,963	386,715
CO	Denver	Arapahoe	1.3360	966,429	1,291,120
NY	Niagara	Niagara Generation, LLC	1.3348	332,979	444,472
IA	Story	Ames	1.3250	493,196	653,488
IL	Williamson	Marion	1.3167	1,690,093	2,225,404
MN	Saint Louis	Laskin Energy Center	1.2844	709,956	911,880
FL	Jackson	Scholz Electric Generating Plant	1.2760	317,152	404,700
TX	Atascosa	San Miguel	1.2705	3,042,982	3,866,002
WI	Grant	Nelson Dewey	1.2689	1,263,936	1,603,832
NH	Rockingham	Schiller	1.2639	1,077,923	1,362,404

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
MI	Ingham	Eckert Station	1.2634	1,432,289	1,809,577
FL	Polk	Polk	1.2631	1,359,966	1,717,766
IA	Allamakee	Lansing	1.2612	1,705,971	2,151,586
GA	Chatham	Kraft	1.2607	1,099,686	1,386,403
OH	Butler	Hamilton Municipal Power Plant	1.2558	261,015	327,788
PA	Chester	Cromby	1.2515	771,043	964,975
IL	Sangamon	Dallman	1.2445	1,612,987	2,007,362
ND	Morton	R M Heskett	1.2419	488,112	606,192
WY	Campbell	Neil Simpson II	1.2351	810,986	1,001,632
CO	Mesa	Cameo	1.2303	290,063	356,864
WY	Campbell	Wygen I	1.2253	776,087	950,964
MO	Jackson	Blue Valley	1.2234	171,120	209,341
NC	Craven	Craven County Wood Energy	1.2226	402,564	492,189
IA	Muscatine	Fair Station	1.2226	180,178	220,291
MN	Olmsted	Silver Lake	1.2185	130,118	158,543
OH	Pickaway	Picway	1.2173	360,824	439,245
IA	Muscatine	Muscatine	1.2157	1,638,736	1,992,183
KY	Woodford	Tyrone	1.2132	389,904	473,025
KS	Cherokee	Riverton	1.2116	480,607	582,325
NE	Hall	Platte	1.2116	730,302	884,859
MN	Hennepin	Riverside (1927)	1.2049	1,693,389	2,040,404
TX	Harris	AES Deepwater, Inc.	1.2046	922,205	1,110,928
WI	Dane	Blount Street	1.2039	225,212	271,125
OH	Clermont	Walter C Beckjord Generating Station	1.2037	3,060,979	3,684,359
IL	Vermilion	Vermilion Power Station	1.1992	1,035,007	1,241,149
IA	Wapello	Ottumwa	1.1927	4,522,436	5,393,916
TX	Bexar	J T Deely	1.1905	5,523,623	6,575,781

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
NY	Rockland	Lovett Generating Station	1.1874	311,044	369,331
MT	Big Horn	Hardin Generating Station	1.1871	688,404	817,202
MN	Otter Tail	Hoot Lake	1.1844	813,695	963,773
ND	Mercer	Coyote	1.1827	3,180,283	3,761,364
OH	Montgomery	O H Hutchings	1.1784	391,523	461,384
IN	Warrick	Alcoa Allowance Management Inc	1.1771	5,039,850	5,932,519
TX	Bexar	V H Braunig	1.1767	1,059,206	1,246,363
NE	Adams	Gerald Whelan Energy Center	1.1708	570,720	668,211
WY	Campbell	Wygen II	1.1700	778,955	911,362
IL	Crawford	Hutsonville	1.1678	1,029,233	1,201,915
IA	Des Moines	Burlington (IA)	1.1677	1,267,758	1,480,360
MN	Cook	Taconite Harbor Energy Center	1.1661	1,566,071	1,826,263
KY	Webster	Robert Reid	1.1657	147,961	172,471
NC	Robeson	W H Weatherspoon	1.1621	796,083	925,137
KY	Ohio	D B Wilson	1.1598	3,243,175	3,761,299
IN	Wayne	Whitewater Valley	1.1551	441,563	510,066
IL	Montgomery	Coffeen	1.1549	5,931,137	6,849,941
WY	Converse	Dave Johnston	1.1513	6,144,183	7,073,770
KY	Daviess	Elmer Smith	1.1498	2,261,613	2,600,352
KS	Wyandotte	Quindaro	1.1496	1,176,107	1,352,055
IL	Peoria	E D Edwards	1.1466	4,632,806	5,311,855
IN	Jasper	R M Schahfer Generating Station	1.1446	10,717,284	12,267,350
MN	Itasca	Boswell Energy Center	1.1425	7,691,309	8,787,558
OK	Mayer	Grand River Dam Authority	1.1407	7,507,894	8,564,473
CO	Montrose	Nucla	1.1387	776,421	884,089
MT	Yellowstone	J E Corette	1.1384	1,086,477	1,236,844
IA	Clinton	Milton L Kapp	1.1380	780,221	887,858

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
IN	Vigo	Wabash River Gen Station	1.1375	5,198,563	5,913,113
SC	Berkeley	Jefferies	1.1365	1,414,868	1,608,027
MI	Monroe	J R Whiting	1.1330	2,375,158	2,691,067
TX	Potter	Harrington Station	1.1322	8,238,817	9,328,379
ND	Mercer	Antelope Valley	1.1311	6,881,202	7,783,055
CO	Adams	Cherokee	1.1306	4,965,964	5,614,720
IL	Cook	Crawford	1.1294	2,667,786	3,012,959
WA	Lewis	Centralia	1.1258	9,449,495	10,638,610
MI	Marquette	Presque Isle	1.1248	3,505,792	3,943,324
MS	Lamar	R D Morrow Senior Generating Plant	1.1235	2,756,168	3,096,673
IL	Tazewell	Powerton	1.1223	9,838,393	11,042,061
KY	Hancock	Coleman	1.1196	3,201,065	3,583,946
WY	Campbell	Wyodak	1.1195	3,139,007	3,514,140
WI	Kenosha	Pleasant Prairie	1.1170	8,430,467	9,416,889
WI	Brown	Pulliam	1.1166	2,306,259	2,575,129
KY	Clark	William C. Dale	1.1163	1,129,085	1,260,394
KS	Shawnee	Tecumseh Energy Center	1.1153	1,592,260	1,775,908
TX	Bexar	J K Spruce	1.1127	4,528,249	5,038,457
NE	Lancaster	Sheldon	1.1113	1,609,498	1,788,614
IN	Porter	Bailly Generating Station	1.1111	2,846,092	3,162,294
NJ	Hudson	Hudson Generating Station	1.1101	2,387,930	2,650,739
MO	Henry	Montrose	1.1098	3,550,703	3,940,585
WY	Platte	Laramie River	1.1082	13,249,741	14,683,712
CO	Boulder	Valmont	1.1069	1,253,126	1,387,145
NE	Dodge	Lon D Wright Power Plant	1.1063	501,834	555,185
WV	Pleasants	Willow Island Power Station	1.1012	546,235	601,534
MO	Osage	Chamois Power Plant	1.1003	364,446	401,004

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
KY	Muhlenberg	Green River	1.1003	1,017,094	1,119,074
NE	Douglas	North Omaha Station	1.0996	3,828,987	4,210,262
PA	Delaware	Eddystone Generating Station	1.0991	2,572,115	2,827,039
MO	Scott	Sikeston	1.0988	2,010,791	2,209,444
WV	Preston	Albright Power Station	1.0971	914,537	1,003,339
ND	McLean	Coal Creek	1.0967	8,910,174	9,771,807
OH	Ashtabula	Ashtabula	1.0965	1,314,937	1,441,839
MT	Rosebud	Colstrip	1.0959	17,533,038	19,213,973
TX	Rusk	Martin Lake	1.0950	19,200,584	21,023,701
TX	Milam	Sandow	1.0937	4,093,554	4,477,217
SD	Grant	Big Stone	1.0931	3,729,110	4,076,354
MI	Eaton	Erickson	1.0927	1,193,059	1,303,634
CO	El Paso	Martin Drake	1.0926	1,915,136	2,092,502
AL	Greene	Greene County	1.0920	3,759,395	4,105,410
VA	Alexandria (City)	Mirant Potomac River	1.0914	883,850	964,671
IL	Christian	Kincaid Station	1.0912	7,970,018	8,696,503
FL	Hillsborough	Big Bend	1.0907	9,352,353	10,200,365
KS	Wyandotte	Nearman Creek	1.0900	1,697,417	1,850,261
ND	Mercer	Leland Olds	1.0899	4,864,105	5,301,298
TX	Titus	Welsh Power Plant	1.0886	10,809,388	11,766,790
OK	Choctaw	Hugo	1.0880	3,370,267	3,666,825
MD	Anne Arundel	Herbert A Wagner	1.0867	2,220,958	2,413,532
FL	Polk	C D McIntosh Jr Power Plant	1.0862	3,351,021	3,640,040
AZ	Cochise	Apache Station	1.0841	3,108,249	3,369,786
MO	Saint Louis	Meramec	1.0817	6,245,353	6,755,597
GA	Dougherty	Mitchell (GA)	1.0813	574,167	620,864
UT	Carbon	Carbon	1.0807	1,286,700	1,390,530

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
WI	Milwaukee	South Oak Creek	1.0796	6,286,151	6,786,404
MO	Jasper	Asbury	1.0785	1,416,277	1,527,497
UT	Uintah	Bonanza	1.0784	3,943,226	4,252,301
CO	El Paso	Ray D Nixon	1.0784	1,894,430	2,042,887
IL	Will	Joliet 9	1.0774	1,999,630	2,154,477
MN	Sherburne	Sherburne County	1.0774	15,385,231	16,575,534
TX	Titus	Monticello	1.0757	15,915,321	17,120,167
CO	Routt	Hayden	1.0753	3,723,792	4,004,313
WY	Lincoln	Naughton	1.0748	5,496,245	5,907,559
CT	Fairfield	Norwalk Harbor Station	1.0746	242,080	260,147
NC	Rockingham	Dan River	1.0746	1,107,147	1,189,757
FL	Escambia	Crist Electric Generating Plant	1.0743	5,637,137	6,056,181
KS	Douglas	Lawrence Energy Center	1.0733	4,135,801	4,438,957
WI	Columbia	Columbia	1.0732	7,730,446	8,296,041
OH	Lorain	Avon Lake Power Plant	1.0731	2,804,974	3,010,070
AZ	Coconino	Navajo Generating Station	1.0727	19,045,823	20,431,389
WI	Buffalo	J P Madgett	1.0719	2,825,058	3,028,196
MO	Buchanan	Lake Road	1.0713	699,341	749,194
TX	Freestone	Big Brown	1.0706	8,962,690	9,595,039
LA	De Soto	Dolet Hills Power Station	1.0702	5,276,721	5,647,383
IL	Will	Will County	1.0681	6,604,752	7,054,648
TN	Anderson	Bull Run	1.0664	4,075,700	4,346,252
MD	Washington	R. Paul Smith Power Station	1.0657	495,105	527,631
ND	Oliver	Milton R Young	1.0657	5,888,301	6,275,137
IL	Massac	Joppa Steam	1.0645	8,633,350	9,190,409
IA	Woodbury	George Neal South	1.0631	4,720,175	5,018,233
NE	Lincoln	Gerald Gentleman Station	1.0621	10,447,267	11,096,341

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
MO	Greene	Southwest	1.0593	1,071,430	1,134,913
KY	Henderson	HMP&L Station 2	1.0590	2,375,302	2,515,526
TX	Harrison	H W Pirkey Power Plant	1.0582	5,015,845	5,307,808
KS	Pottawatomie	Jeffrey Energy Center	1.0574	14,567,691	15,404,516
MD	Baltimore	C P Crane	1.0571	1,893,624	2,001,776
CT	Fairfield	Bridgeport Harbor Station	1.0563	3,018,604	3,188,531
TX	Limestone	Limestone	1.0562	14,753,701	15,582,153
IL	Mason	Havana	1.0538	3,060,557	3,225,098
AR	Jefferson	White Bluff	1.0536	11,582,672	12,203,688
PA	Washington	Elrama	1.0533	1,303,801	1,373,281
NV	Eureka	TS Power Plant	1.0525	1,170,873	1,232,335
IL	Putnam	Hennepin Power Station	1.0512	1,737,635	1,826,568
CO	Pueblo	Comanche (470)	1.0511	4,814,911	5,060,763
NJ	Mercer	Mercer Generating Station	1.0507	2,357,938	2,477,464
VA	Giles	Glen Lyn	1.0505	1,471,832	1,546,151
NM	McKinley	Escalante	1.0504	1,833,793	1,926,247
NY	Monroe	Rochester 7 - Russell Station	1.0493	277,768	291,475
IL	Lake	Waukegan	1.0489	4,303,035	4,513,317
AR	Independence	Independence	1.0486	11,823,700	12,397,867
CO	Moffat	Craig	1.0484	10,743,715	11,263,226
AL	Washington	Charles R Lowman	1.0469	3,908,671	4,092,050
AZ	Navajo	Cholla	1.0450	8,139,092	8,505,207
NC	Gaston	Riverbend	1.0449	2,099,800	2,194,066
MI	Ottawa	J H Campbell	1.0433	10,690,284	11,152,819
VA	Halifax	Clover Power Station	1.0426	6,283,109	6,550,780
SC	Georgetown	Winyah	1.0420	7,675,236	7,997,550
GA	Effingham	McIntosh (6124)	1.0418	797,029	830,334



**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
AZ	Apache	Coronado Generating Station	1.0414	7,029,544	7,320,286
TX	Robertson	Twin Oaks	1.0411	2,712,627	2,824,062
WI	Sheboygan	Edgewater (4050)	1.0386	4,910,307	5,100,087
OK	Muskogee	Muskogee	1.0386	10,649,453	11,060,751
FL	Citrus	Crystal River	1.0375	14,555,296	15,101,754
OH	Coshocton	Conesville	1.0366	10,137,679	10,508,800
MA	Hampden	Mount Tom	1.0358	831,638	861,407
KY	Webster	R D Green	1.0347	3,958,230	4,095,465
IL	Cook	Fisk	1.0346	1,993,106	2,062,067
NH	Merrimack	Merrimack	1.0345	3,008,437	3,112,114
GA	Monroe	Scherer	1.0317	25,727,556	26,543,604
NV	Clark	Reid Gardner	1.0297	3,761,774	3,873,519
KS	Finney	Holcomb	1.0286	2,996,941	3,082,505
IA	Scott	Riverside (1081)	1.0274	729,987	749,963
GA	Floyd	Hammond	1.0267	4,322,728	4,438,326
AL	Jackson	Widows Creek	1.0264	9,998,844	10,262,492
MO	Jackson	Hawthorn	1.0256	4,009,829	4,112,681
UT	Emery	Hunter	1.0245	11,019,186	11,289,666
IA	Woodbury	George Neal North	1.0244	6,579,769	6,740,223
IN	Sullivan	Merom	1.0222	6,843,420	6,995,291
NM	San Juan	San Juan	1.0219	11,646,297	11,901,834
CA	Los Angeles	Grayson Power Plant	1.0219	183,804	187,835
NC	Rowan	Buck	1.0214	1,399,518	1,429,458
PA	Lawrence	New Castle	1.0209	1,348,844	1,377,026
VA	Chesapeake (City)	Chesapeake Energy Center	1.0194	3,645,591	3,716,445
SC	Horry	Dolphus M Grainger	1.0193	739,312	753,572

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
IL	Will	Joliet 29	1.0190	5,983,413	6,097,277
WY	Sweetwater	Jim Bridger	1.0169	16,334,677	16,610,691
NY	Chautauqua	Dunkirk	1.0157	3,914,325	3,975,815
CO	Morgan	Pawnee	1.0148	3,781,654	3,837,802
IN	Pike	Petersburg	1.0147	12,655,586	12,841,192
IN	Lake	State Line Generating Station (IN)	1.0143	3,981,242	4,038,284
IL	Jasper	Newton	1.0142	8,973,713	9,101,433
IN	Pike	Frank E Ratts	1.0142	1,822,844	1,848,666
MI	Saint Clair	Belle River	1.0134	8,673,005	8,789,310
FL	Duval	St. Johns River Power	1.0132	9,309,074	9,431,994
MO	Greene	James River	1.0130	1,564,904	1,585,205
LA	Pointe Coupee	Big Cajun 2	1.0110	13,624,196	13,773,957
TX	Fayette	Sam Seymour	1.0110	12,530,543	12,667,801
MS	Hinds	Rex Brown	1.0107	109,646	110,819
LA	Calcasieu	R S Nelson	1.0100	5,324,640	5,377,789
GA	Coweta	Yates	1.0097	7,367,423	7,439,151
OH	Adams	J M Stuart	1.0096	11,896,328	12,010,777
TN	Roane	Kingston	1.0092	10,972,232	11,073,117
OH	Adams	Killen Station	1.0090	3,941,409	3,976,990
AR	Benton	Flint Creek Power Plant	1.0082	3,824,158	3,855,637
KY	McCracken	Shawnee	1.0075	10,333,411	10,410,548
IN	Posey	A B Brown Generating Station	1.0068	3,656,077	3,680,938
MA	Essex	Salem Harbor	1.0054	1,247,292	1,254,051
MI	Huron	Harbor Beach	1.0054	268,865	270,307
FL	Alachua	Deerhaven	1.0040	1,625,040	1,631,563
FL	Duval	Northside	1.0039	4,753,631	4,772,262
MN	Washington	Allen S King	1.0037	3,450,664	3,463,387

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
SC	Berkeley	Cross	1.0032	12,462,504	12,502,513
IL	Madison	Wood River Power Station	1.0019	3,441,233	3,447,672
KS	Linn	La Cygne	1.0016	10,530,753	10,547,508
IN	LaPorte	Michigan City Generating Station	1.0011	2,546,155	2,548,895
TN	Sumner	Gallatin	0.9994	8,343,554	8,338,758
OH	Cuyahoga	Lake Shore	0.9993	1,214,055	1,213,260
OH	Trumbull	Niles	0.9979	967,835	965,828
ME	Cumberland	William F Wyman	0.9977	186,341	185,915
MO	Randolph	Thomas Hill Energy Center	0.9977	7,499,302	7,481,841
OK	Noble	Sooner	0.9974	8,109,423	8,088,351
TN	Humphreys	Johnsonville	0.9966	8,442,115	8,413,715
MD	Prince George's	Mirant Chalk Point	0.9963	4,747,098	4,729,658
TX	Wilbarger	Oklunion Power Station	0.9962	4,415,016	4,398,361
IN	Marion	Harding Street Station (EW Stout)	0.9953	3,679,596	3,662,381
MS	Harrison	Watson Electric Generating Plant	0.9946	5,402,435	5,373,383
AL	Shelby	E C Gaston	0.9925	12,077,245	11,987,120
OR	Morrow	Boardman	0.9923	4,264,585	4,231,860
MS	Jackson	Daniel Electric Generating Plant	0.9909	9,108,029	9,025,182
AL	Walker	Gorgas	0.9904	8,368,869	8,288,768
SC	Anderson	W S Lee	0.9894	1,413,109	1,398,156
IL	Fulton	Duck Creek	0.9887	2,482,081	2,454,151
MI	Bay	J C Weadock	0.9882	1,927,839	1,905,055
DE	Sussex	Indian River	0.9879	4,159,284	4,108,926
MO	New Madrid	New Madrid Power Plant	0.9873	7,746,035	7,648,038
WV	Grant	Mount Storm Power Station	0.9873	10,906,338	10,767,669
NY	Erie	Huntley Power	0.9869	2,581,827	2,548,005
TX	Goliad	Coletto Creek	0.9864	5,163,482	5,093,373

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
MI	Saint Clair	St. Clair	0.9860	8,360,114	8,243,125
IL	Randolph	Baldwin Energy Complex	0.9854	13,874,906	13,671,651
PA	Northampton	Portland	0.9850	2,290,198	2,255,811
PA	Washington	Mitchell Power Station	0.9847	1,602,322	1,577,853
MI	Bay	Dan E Karn	0.9841	2,394,527	2,356,386
CT	Middlesex	Middletown	0.9824	167,535	164,585
AL	Jefferson	James H Miller Jr	0.9823	22,363,540	21,968,553
NE	Otoe	Nebraska City Station	0.9813	5,265,440	5,167,077
TX	Fort Bend	W A Parish	0.9808	20,989,067	20,586,915
NJ	Cape May	B L England	0.9795	1,110,914	1,088,095
NY	Yates	AES Greenidge	0.9793	731,082	715,956
OH	Hamilton	Miami Fort Generating Station	0.9782	8,136,778	7,959,343
MO	Jefferson	Rush Island	0.9740	7,989,659	7,782,006
MI	Ottawa	J B Sims	0.9737	405,030	394,361
TN	Stewart	Cumberland	0.9734	17,499,423	17,034,409
TX	Lamb	Tolk Station	0.9733	7,942,902	7,731,194
MO	Platte	Iatan	0.9730	4,479,225	4,358,254
VA	Fluvanna	Bremo Power Station	0.9730	1,293,898	1,258,917
KY	Carroll	Ghent	0.9727	13,685,209	13,311,010
PA	Allegheny	Cheswick	0.9723	2,635,207	2,562,302
NY	Orange	Dynegy Danskammer	0.9696	2,814,513	2,728,988
AL	Colbert	Colbert	0.9694	8,249,253	7,996,675
IA	Louisa	Louisa	0.9690	5,297,008	5,132,594
PA	Clearfield	Shawville	0.9686	3,723,158	3,606,076
PA	Armstrong	Armstrong Power Station	0.9679	1,567,952	1,517,695
NC	New Hanover	L V Sutton	0.9625	3,065,159	2,950,070
WI	Marathon	Weston	0.9614	4,808,058	4,622,522

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
LA	Saint Charles	Waterford 1 & 2	0.9610	621,364	597,144
SC	Darlington	H B Robinson	0.9608	1,085,888	1,043,371
MO	Jackson	Sibley	0.9608	2,727,940	2,620,944
MI	Muskegon	B C Cobb	0.9604	2,165,943	2,080,074
UT	Emery	Huntington	0.9581	7,572,960	7,255,429
AZ	Pima	Irvington Generating Station	0.9573	1,104,236	1,057,107
NC	Cleveland	Cliffside	0.9572	4,592,903	4,396,445
WV	Pleasants	Pleasants Power Station	0.9569	9,174,678	8,779,652
FL	Orange	Curtis H. Stanton Energy Center	0.9548	6,235,859	5,953,713
WV	Monongalia	Fort Martin Power Station	0.9539	7,153,232	6,823,163
PA	Berks	Titus	0.9530	1,302,526	1,241,302
KY	Mercer	E W Brown	0.9522	4,518,998	4,302,980
TN	Shelby	Allen	0.9512	5,634,054	5,359,344
FL	Putnam	Seminole (136)	0.9510	7,835,382	7,451,717
NV	Humboldt	North Valmy	0.9510	3,780,586	3,595,277
OH	Gallia	Kyger Creek	0.9505	7,425,852	7,058,054
TX	Grimes	Gibbons Creek Steam Electric Station	0.9504	3,803,472	3,614,817
MO	Franklin	Labadie	0.9497	15,889,046	15,089,571
CO	Larimer	Rawhide Energy Station	0.9496	2,352,143	2,233,611
SC	Colleton	Canadys Steam	0.9494	2,359,390	2,239,996
NC	Buncombe	Asheville	0.9492	2,593,501	2,461,770
NM	San Juan	Four Corners Steam Elec Station	0.9491	15,821,300	15,015,845
WI	Buffalo	Alma	0.9475	673,584	638,188
KY	Boone	East Bend	0.9474	4,655,852	4,410,939
PA	Indiana	Homer City	0.9473	12,111,819	11,472,948
IA	Pottawattamie	Walter Scott Jr. Energy Center	0.9472	12,636,929	11,969,331
TN	Hawkins	John Sevier	0.9470	5,214,099	4,937,983

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
GA	Bartow	Bowen	0.9459	23,432,200	22,164,807
UT	Millard	Intermountain	0.9449	11,355,050	10,729,730
IN	Morgan	IPL Eagle Valley Generating Station	0.9445	1,301,323	1,229,066
NC	Wayne	H F Lee Steam Electric Plant	0.9441	1,810,460	1,709,326
GA	Putnam	Harlee Branch	0.9439	10,669,453	10,071,386
PA	Greene	Hatfields Ferry Power Station	0.9425	8,635,005	8,138,511
MI	Monroe	Monroe	0.9419	20,599,816	19,403,707
WI	Vernon	Genoa	0.9416	2,516,704	2,369,763
OH	Jefferson	W H Sammis	0.9404	15,779,272	14,838,241
NY	Tompkins	AES Cayuga, LLC	0.9397	2,388,361	2,244,230
VA	Russell	Clinch River	0.9389	3,863,153	3,627,128
NC	Catawba	Marshall	0.9389	13,566,180	12,736,645
NC	Gaston	G G Allen	0.9380	6,920,428	6,491,089
NY	New York	East River	0.9371	2,275,189	2,132,137
WV	Mason	Phil Sporn	0.9371	5,299,233	4,965,909
IN	Dearborn	Tanners Creek	0.9356	5,007,893	4,685,423
WV	Marshall	Kammer	0.9332	3,269,240	3,050,760
WV	Kanawha	Kanawha River	0.9325	2,659,064	2,479,681
VA	Chesterfield	Chesterfield Power Station	0.9319	8,536,501	7,954,991
SC	Orangeburg	Cope Station	0.9312	2,756,051	2,566,321
KY	Jefferson	Mill Creek	0.9304	11,451,633	10,654,883
NY	Niagara	AES Somerset (Kintigh )	0.9291	5,472,576	5,084,448
MN	Dakota	Black Dog	0.9287	1,140,986	1,059,596
OH	Jefferson	Cardinal	0.9285	11,078,447	10,286,340
MD	Montgomery	Mirant Dickerson	0.9277	2,996,144	2,779,521
WV	Mason	Mountaineer (1301)	0.9276	10,552,388	9,788,558
MD	Anne Arundel	Brandon Shores	0.9262	8,455,011	7,830,968

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
DE	New Castle	Edge Moor	0.9236	1,589,232	1,467,879
WV	Marshall	Mitchell (WV)	0.9218	11,473,802	10,576,901
CT	New Haven	New Haven Harbor	0.9213	138,007	127,149
KY	Trimble	Trimble County	0.9205	4,788,062	4,407,565
VA	York	Yorktown Power Station	0.9195	2,403,025	2,209,471
AZ	Apache	Springerville Generating Station	0.9165	9,838,357	9,017,006
OH	Lake	Eastlake	0.9157	8,397,112	7,689,216
PA	Montour	Montour	0.9151	9,621,191	8,804,593
IN	Floyd	R Gallagher	0.9151	2,940,699	2,691,037
OK	Rogers	Northeastern	0.9147	9,703,425	8,875,788
IN	Vermillion	Cayuga	0.9146	6,756,287	6,179,439
PA	Armstrong	Keystone	0.9123	14,972,503	13,659,777
WV	Putnam	John E Amos	0.9122	17,281,762	15,764,538
OH	Washington	Muskingum River	0.9118	9,571,874	8,727,642
NC	Stokes	Belews Creek	0.9114	17,394,041	15,852,850
MD	Charles	Mirant Morgantown	0.9102	7,224,068	6,575,432
KY	Jefferson	Cane Run	0.9082	3,727,208	3,385,004
KY	Lawrence	Big Sandy	0.9080	6,304,815	5,724,586
PA	Beaver	Bruce Mansfield	0.9043	20,081,358	18,160,470
IN	Spencer	Rockport	0.9040	20,859,779	18,858,235
FL	Pinellas	P L Bartow	0.9027	1,409,207	1,272,146
CA	San Diego	Cabrillo Power I Encina Power Station	0.9002	1,106,759	996,297
MO	Saint Charles	Sioux	0.8965	6,215,429	5,572,039
WV	Harrison	Harrison Power Station	0.8926	14,189,830	12,666,366
PA	Indiana	Conemaugh	0.8911	12,213,108	10,882,876
OK	Comanche	Comanche (8059)	0.8878	796,577	707,163
IN	Jefferson	Clifty Creek	0.8868	9,160,434	8,123,889

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
OH	Clermont	W H Zimmer Generating Station	0.8866	10,193,238	9,037,148
FL	Volusia	Debary	0.8846	128,393	113,580
MA	Bristol	Brayton Point	0.8842	8,372,226	7,403,128
LA	Rapides	Rodemacher Power Station (6190)	0.8826	3,528,825	3,114,628
NC	Chatham	Cape Fear	0.8787	1,959,549	1,721,785
KY	Clark	Smith Generating Facility	0.8771	142,838	125,289
NJ	Salem	Deepwater	0.8766	352,815	309,293
IN	Gibson	Gibson	0.8735	23,594,413	20,609,836
FL	Pasco	Anclote	0.8716	2,605,507	2,270,975
OH	Gallia	Gen J M Gavin	0.8699	22,666,724	19,718,216
PA	Northampton	Martins Creek	0.8678	379,970	329,722
SC	Richland	Wateree	0.8616	5,217,872	4,495,524
TX	Orange	Sabine Cogeneration Facility	0.8574	480,077	411,605
GA	Heard	Wansley (6052)	0.8528	15,466,900	13,189,493
SC	Lexington	McMeekin	0.8505	1,944,582	1,653,870
LA	Caddo	Arsenal Hill Power Plant	0.8480	109,545	92,896
KY	Pulaski	John S. Cooper	0.8411	2,226,853	1,872,983
TX	Harris	San Jacinto Steam Electric Station	0.8393	881,258	739,683
PA	York	Brunner Island	0.8369	10,512,281	8,798,118
RI	Providence	Ocean State Power II	0.8321	378,956	315,344
GA	Cobb	Jack McDonough	0.8311	3,430,461	2,851,002
FL	Osceola	Intercession City	0.8295	633,635	525,582
MA	Barnstable	Canal Station	0.8240	1,875,102	1,545,163
MI	Wayne	Mistersky	0.8215	167,874	137,913
SC	Aiken	Urquhart	0.8209	1,271,933	1,044,145
SC	Berkeley	Williams	0.8175	4,392,422	3,590,694
AL	Mobile	Barry	0.8057	14,755,552	11,888,261



**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
TX	Harris	Greens Bayou	0.8022	112,202	90,003
FL	Broward	Port Everglades	0.7952	2,643,848	2,102,486
SD	Minnehaha	Angus Anson	0.7947	127,207	101,092
NY	Rockland	Bowline Generating Station	0.7884	246,419	194,275
NY	Orange	Dynegy Roseton	0.7882	470,591	370,937
NH	Rockingham	Newington	0.7802	126,039	98,334
NC	Halifax	Rosemary Power Station	0.7801	128,398	100,168
NJ	Hudson	Bayonne Plant Holding, LLC	0.7800	140,774	109,806
PA	Philadelphia	Grays Ferry Cogen Partnership	0.7713	280,926	216,666
CA	Monterey	Salinas River Cogeneration Company	0.7685	309,001	237,473
CA	Monterey	Sargent Canyon Cogen Company	0.7576	305,501	231,457
FL	Brevard	Indian River (55318)	0.7551	130,464	98,507
FL	Bay	Lansing Smith Generating Plant	0.7545	4,961,031	3,742,858
KS	Sedgwick	Murray Gill Energy Center	0.7489	240,169	179,872
IL	Sangamon	Lakeside	0.7474	583,650	436,207
TX	Bastrop	Bastrop Clean Energy Center	0.7457	1,325,610	988,510
NY	Nassau	Glenwood	0.7456	105,405	78,585
MO	Cass	South Harper Peaking Facility	0.7451	109,058	81,254
TN	Haywood	Lagoon Creek	0.7443	263,777	196,338
RI	Providence	Manchester Street	0.7437	941,593	700,236
TX	Ector	Odessa-Ector Generating Station	0.7427	1,806,463	1,341,602
MS	Jackson	Chevron Cogenerating Station	0.7406	578,624	428,521
CA	Humboldt	Humboldt Bay	0.7386	530,744	392,004
OK	Tulsa	Tulsa	0.7380	298,406	220,218
CA	Contra Costa	Pittsburg Power Plant (CA)	0.7355	179,802	132,239
FL	Palm Beach	Riviera	0.7354	834,441	613,646
MI	Saint Clair	Greenwood	0.7348	282,905	207,870

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
TX	Ward	Permian Basin	0.7344	277,553	203,822
TX	Orange	SRW Cogen Limited Partnership	0.7327	2,278,127	1,669,239
RI	Providence	Ocean State Power	0.7318	392,086	286,945
VA	Louisa	Louisa Generation Facility	0.7297	150,435	109,780
FL	Wakulla	S O Purdom	0.7261	992,506	720,704
LA	Jefferson	Ninemile Point	0.7261	4,190,198	3,042,329
TX	El Paso	Newman	0.7239	1,342,189	971,567
NY	Kings	Brooklyn Navy Yard Cogeneration	0.7238	1,573,470	1,138,921
FL	Suwannee	Suwannee River	0.7230	376,609	272,301
FL	Alachua	J R Kelly	0.7225	109,922	79,418
ME	Penobscot	Maine Independence Station	0.7211	1,013,339	730,736
SC	Cherokee	Cherokee County Cogen	0.7202	102,191	73,597
NJ	Bergen	Bergen	0.7137	3,521,241	2,513,103
TX	Victoria	Sam Rayburn Plant	0.7123	478,564	340,862
TX	Brazoria	Sweeny Cogeneration Facility	0.7119	2,562,976	1,824,455
TX	Bastrop	Lost Pines 1	0.7096	2,085,905	1,480,180
MA	Hampden	Masspower	0.7089	159,028	112,735
FL	Manatee	Manatee	0.7077	7,335,810	5,191,750
TX	Lubbock	Alex Ty Cooke Generating Station	0.7073	112,689	79,700
MN	Martin	Lakefield Junction Generating	0.7072	116,003	82,040
CA	Shasta	Redding Power Plant	0.7060	125,850	88,850
VA	Fauquier	Marsh Run Generation Facility	0.7047	148,964	104,979
PA	Northampton	Bethlehem Power Plant	0.7045	919,164	647,587
LA	Acadia	Bayou Cove Peaking Power Plant	0.7039	112,350	79,080
AZ	Yuma	Yuma Axis	0.7026	307,069	215,762
FL	Brevard	Cape Canaveral	0.7025	1,357,051	953,395
MS	Warren	Baxter Wilson	0.7014	1,949,160	1,367,087

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
SC	Anderson	John S. Rainey Generating Station	0.7002	823,249	576,408
GA	Jackson	Dahlberg (Jackson County)	0.6997	126,092	88,227
DE	New Castle	Hay Road	0.6993	557,854	390,115
MI	Ottawa	Zeeland Generating Station	0.6985	591,866	413,417
CA	Los Angeles	AES Redondo Beach	0.6962	314,731	219,106
FL	Martin	Martin	0.6949	11,819,971	8,213,266
TX	Bexar	O W Sommers	0.6927	1,472,415	1,019,978
NY	Queens	Astoria Generating Station	0.6924	2,301,895	1,593,724
TX	Montgomery	Lewis Creek	0.6895	2,054,148	1,416,295
MA	Norfolk	Bellingham	0.6894	197,782	136,356
TX	Guadalupe	Guadalupe Generating Station	0.6885	3,016,490	2,076,997
UT	Salt Lake	Gadsby	0.6874	544,604	374,386
FL	Broward	Lauderdale	0.6870	3,612,332	2,481,845
NY	Suffolk	Richard M Flynn (Holtsville)	0.6830	652,879	445,931
TX	Palo Pinto	R W Miller	0.6830	586,542	400,619
FL	Polk	Tiger Bay	0.6805	374,753	255,003
FL	Volusia	Sanford	0.6804	6,766,402	4,604,188
MA	Norfolk	ANP Bellingham Energy Project	0.6804	1,138,484	774,621
IN	Hamilton	Noblesville	0.6801	258,079	175,531
CA	San Bernardino	Etiwanda Generating Station	0.6800	905,728	615,917
PA	Lebanon	AES Ironwood	0.6800	1,090,259	741,333
IN	Dearborn	Lawrenceburg Energy Facility	0.6796	449,862	305,736
TX	Young	Graham	0.6795	438,504	297,976
TX	Freestone	Freestone Power Generation	0.6786	2,463,913	1,672,098
LA	Saint Charles	Taft Cogeneration Facility	0.6786	2,871,690	1,948,644
CO	Weld	Spindle Hill Energy Center	0.6785	196,357	133,220
TX	Hidalgo	Calpine Hidalgo Energy Center	0.6775	1,535,571	1,040,424

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
FL	Brevard	Oleander Power Project	0.6773	310,627	210,382
FL	Hardee	Midulla Generating Station	0.6761	1,069,468	723,028
ID	Elmore	Evander Andrews Power Complex	0.6753	164,484	111,080
NC	Richmond	Richmond County Plant	0.6745	1,903,371	1,283,796
LA	Lafayette	Hargis-Hebert Electric Generating Statio	0.6742	141,346	95,295
TX	Tarrant	Handley Generating Station	0.6741	474,129	319,595
CA	Los Angeles	Scattergood Generating Station	0.6739	1,138,829	767,506
SC	Jasper	Jasper County Generating Facility	0.6729	1,630,541	1,097,229
CA	Orange	AES Huntington Beach	0.6724	1,506,723	1,013,145
MS	Jones	Moselle Generating Plant	0.6723	138,837	93,338
LA	Lafayette	T J Labbe Electric Generating Station	0.6713	107,045	71,856
TX	Hood	Wolf Hollow I, LP	0.6706	2,486,277	1,667,220
AL	Covington	McWilliams	0.6703	759,930	509,393
TX	Fannin	Valley (TXU)	0.6699	493,691	330,711
FL	Duval	Brandy Branch	0.6689	892,348	596,852
LA	Orleans	Michoud	0.6688	2,165,507	1,448,340
ME	Franklin	Androscoggin Energy	0.6680	594,907	397,421
VA	Caroline	Ladysmith Combustion Turbine Sta	0.6661	257,815	171,724
NJ	Union	Linden Generating Station	0.6660	2,753,693	1,833,979
TX	Collin	Ray Olinger	0.6657	136,415	90,813
NJ	Middlesex	North Jersey Energy Associates	0.6653	793,368	527,862
NC	Rowan	Plant Rowan County	0.6646	628,083	417,429
CA	San Bernardino	High Desert Power Project	0.6645	2,271,669	1,509,411
PA	Delaware	FPL Energy Marcus Hook, LP	0.6635	1,857,101	1,232,144
NV	Clark	Silverhawk	0.6633	1,647,740	1,092,949
NJ	Essex	Newark Bay Cogen	0.6631	126,577	83,939
AR	Hot Spring	Lake Catherine	0.6626	106,447	70,530

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
AL	Calhoun	Calhoun Power Company I, LLC	0.6623	236,062	156,353
TX	Harris	Optim Energy Altura Cogen, LLC	0.6623	2,953,483	1,956,134
NY	Suffolk	Northport	0.6618	4,759,794	3,150,097
TX	Hays	Hays Energy Project	0.6614	3,361,066	2,223,130
IL	Lake	Zion Energy Center	0.6611	117,945	77,968
MD	Cecil	Rock Springs Generating Facility	0.6606	132,582	87,584
KS	Sedgwick	Gordon Evans Energy Center	0.6598	612,844	404,380
FL	Hillsborough	Bayside Power Station	0.6598	4,903,685	3,235,548
IA	Polk	Greater Des Moines Energy Center	0.6594	712,325	469,711
LA	Calcasieu	Calcasieu Plant	0.6593	355,049	234,082
OK	Seminole	Seminole (2956)	0.6590	3,482,743	2,295,005
TX	Dallas	Lake Hubbard	0.6582	893,783	588,279
MA	Worcester	ANP Blackstone Energy Company	0.6555	1,313,714	861,142
IL	Will	Elwood Energy Facility	0.6548	131,179	85,893
FL	Lee	Fort Myers	0.6548	6,140,278	4,020,473
NJ	Middlesex	AES Red Oak	0.6546	1,557,701	1,019,747
GA	Effingham	Effingham County Power, LLC	0.6534	717,795	469,031
TX	Yoakum	Mustang Station Units 4 and 5	0.6533	226,440	147,941
MO	Jasper	State Line (MO)	0.6528	949,201	619,608
TX	Kaufman	FPLE Forney, LP	0.6525	5,191,060	3,386,975
PA	Adams	Hunterstown Combined Cycle	0.6523	747,090	487,321
CT	Windham	Lake Road Generating Company	0.6516	1,729,757	1,127,138
TX	Harris	Sam Bertron	0.6511	225,595	146,876
KS	Ford	Fort Dodge aka Judson Large	0.6508	436,175	283,859
CT	Fairfield	Bridgeport Energy	0.6503	1,307,295	850,102
FL	Polk	Hines Energy Complex	0.6500	6,943,283	4,512,895
NH	Rockingham	Granite Ridge Energy	0.6494	3,041,045	1,974,813

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
MI	Montcalm	Renaissance Power	0.6492	287,798	186,833
TX	Lamb	Plant X	0.6479	1,014,870	657,550
KS	Reno	Hutchinson Energy Center	0.6478	283,985	183,976
LA	Saint Charles	Little Gypsy	0.6478	2,120,435	1,373,563
OK	Caddo	Southwestern	0.6477	905,748	586,685
TX	Nueces	Barney M. Davis	0.6477	749,532	485,459
TX	McLennan	Tradinghouse	0.6462	496,917	321,090
NC	Rockingham	Rockingham County Combustion Turbine	0.6447	179,597	115,794
TX	Marion	Wilkes Power Plant	0.6446	1,007,209	649,277
AZ	Maricopa	New Harquahala Generating Company, LLC	0.6440	1,980,532	1,275,512
CA	San Diego	Dynegy South Bay, LLC	0.6439	1,093,126	703,843
PA	Delaware	Liberty Electric Power Plant	0.6433	1,571,151	1,010,745
TX	Gregg	Knox Lee Power Plant	0.6433	323,548	208,124
TX	Brazos	Roland C. Dansby Power Plant	0.6425	182,897	117,508
VA	Hanover	Doswell Limited Partnership	0.6422	137,021	87,989
TX	Dallas	Mountain Creek Generating Station	0.6421	264,685	169,959
LA	Saint Mary	Teche Power Station	0.6421	930,475	597,418
OK	McClain	McClain Energy Facility	0.6420	1,521,505	976,790
TX	Bosque	Bosque County Power Plant	0.6419	873,543	560,695
FL	Osceola	Reliant Energy Osceola	0.6410	221,791	142,176
TX	Hood	Decordova	0.6400	400,931	256,585
NM	Lea	Cunningham	0.6392	1,519,900	971,561
CA	Los Angeles	AES Alamos	0.6389	2,593,483	1,656,994
OR	Umatilla	Hermiston	0.6385	2,428,640	1,550,746
TX	Dallas	North Lake	0.6372	210,856	134,362
NY	Queens	Charles Poletti	0.6363	1,729,215	1,100,240
OK	Tulsa	Riverside (4940)	0.6351	1,982,696	1,259,181

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
CO	El Paso	Fountain Valley Combustion Turbine	0.6347	371,434	235,743
CA	Riverside	Indigo Generation Facility	0.6337	120,179	76,163
IL	Madison	Venice	0.6336	120,259	76,191
NY	Queens	Far Rockaway	0.6335	149,616	94,779
CA	San Francisco	Potrero Power Plant	0.6332	361,824	229,118
TX	Potter	Nichols Station	0.6310	1,163,703	734,316
TX	Orange	Sabine	0.6310	4,163,706	2,627,295
MI	Van Buren	New Covert Generating Project	0.6304	458,860	289,272
GA	Heard	Wansley (7946)	0.6300	380,950	240,006
WA	Lewis	Chehalis Generation Facility	0.6298	1,493,072	940,379
NY	Richmond	Arthur Kill	0.6294	1,324,469	833,594
CA	Fresno	Coalinga Cogeneration Company	0.6291	328,340	206,546
SC	Cherokee	Broad River Energy Center	0.6290	603,814	379,789
TX	Bastrop	Sim Gideon	0.6288	1,126,471	708,358
MS	Washington	Gerald Andrus	0.6285	1,217,863	765,421
NM	Dona Ana	Rio Grande	0.6283	618,599	388,695
VA	Fauquier	Remington Combustion Turbine Station	0.6281	232,529	146,061
AZ	Pinal	Sundance Power Plant	0.6281	192,123	120,678
LA	Iberville	Willow Glen	0.6273	255,499	160,271
CA	Contra Costa	Contra Costa Power Plant	0.6272	122,714	76,970
NY	Bronx	Hell Gate	0.6271	111,393	69,852
MA	Worcester	Millennium Power Partners	0.6270	1,298,807	814,347
GA	Heard	Chattahoochee Energy Facility	0.6268	1,004,727	629,719
TX	Llano	T C Ferguson	0.6263	772,318	483,666
NY	Suffolk	Port Jefferson Energy Center	0.6261	1,053,296	659,426
FL	Pasco	Shady Hills	0.6248	1,171,677	732,093
NJ	Ocean	Ocean Peaking Power, LP	0.6228	113,490	70,676

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
TX	Chambers	Cedar Bayou	0.6215	1,942,774	1,207,362
OK	Oklahoma	Horseshoe Lake	0.6214	1,002,677	623,100
CO	Morgan	Manchief Generating Station	0.6200	216,806	134,427
NV	Clark	Las Vegas Cogeneration II, LLC	0.6190	510,705	316,115
NY	Onondaga	Project Orange Facility	0.6181	255,878	158,158
CA	Los Angeles	El Segundo	0.6175	543,060	335,363
TX	Cherokee	Stryker Creek	0.6171	846,858	522,572
NY	Nassau	E F Barrett	0.6161	1,185,420	730,317
UT	Salt Lake	West Valley Generation Project	0.6159	435,516	268,222
WA	Grays Harbor	Grays Harbor Energy Center	0.6155	534,956	329,239
TX	Harrison	Eastman Cogeneration Facility	0.6140	2,002,481	1,229,622
TX	Hutchinson	Blackhawk Station	0.6137	2,080,725	1,276,940
TX	Travis	Decker Creek	0.6135	1,377,782	845,247
AZ	Maricopa	Agua Fria Generating Station	0.6134	168,136	103,142
CA	Riverside	Blythe Energy	0.6131	992,620	608,577
TX	Lubbock	Jones Station	0.6112	1,539,815	941,124
MA	Middlesex	Mystic	0.6109	6,176,342	3,773,422
KS	Barton	Great Bend Station aka Arthur Mullergren	0.6101	147,792	90,167
KS	Lyon	Emporia Energy Center	0.6073	172,116	104,525
CA	Ventura	Ormond Beach Generating Station	0.6068	813,548	493,698
MS	Jefferson Davis	Silver Creek Generating Plant	0.6063	126,552	76,734
CA	Imperial	El Centro	0.6053	533,328	322,816
FL	Hardee	Vandolah Power Project	0.6041	165,542	100,001
NY	Kings	23rd and 3rd	0.6025	144,333	86,958
CA	San Bernardino	Coolwater Generating Station	0.6002	602,700	361,746
MS	Hinds	Hinds Energy Facility	0.6001	535,086	321,102
OK	Canadian	Mustang	0.5949	827,046	492,047



**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
NY	Suffolk	PPL Edgewood Energy	0.5919	116,199	68,779
OK	Woodward	Mooreland	0.5919	413,050	244,474
IL	Will	University Park Energy	0.5912	151,353	89,484
CA	Sacramento	Carson Cogeneration	0.5912	393,713	232,771
AL	Autauga	Tenaska Central Alabama Gen Station	0.5911	290,748	171,862
NJ	Gloucester	Sunoco Power Generation, LLC	0.5906	236,614	139,738
NM	Lea	Maddox	0.5903	544,015	321,119
NY	Queens	Vernon Boulevard	0.5894	119,906	70,678
NY	Richmond	Pouch Terminal	0.5869	124,090	72,825
LA	East Baton Rouge	Louisiana 1	0.5858	3,541,537	2,074,663
IL	Will	PPL University Park Power Project	0.5858	169,715	99,414
PA	Franklin	Chambersburg Units 12 and 13	0.5839	100,405	58,631
TX	Nolan	Sweetwater Generating Plant	0.5828	176,758	103,006
NV	Lyon	Fort Churchill	0.5822	839,533	488,818
CA	Ventura	Mandalay Generating Station	0.5815	639,170	371,661
FL	Polk	Auburndale Cogeneration Facility	0.5794	571,776	331,263
MI	Mason	Michigan Power Limited Partnership	0.5778	794,329	458,934
CT	New Haven	Wallingford Energy	0.5777	136,514	78,868
TX	Bexar	Leon Creek	0.5750	173,811	99,933
CA	Sacramento	Cosumnes Power Plant	0.5741	2,609,428	1,497,968
NE	Gage	Beatrice	0.5728	317,160	181,655
CA	Fresno	Kings River Conservation District Malaga	0.5708	152,128	86,833
NY	Suffolk	Pinelawn Power	0.5660	330,761	187,205
ME	Hancock	Bucksport Clean Energy	0.5658	1,407,006	796,139
NY	Queens	Ravenswood Generating Station	0.5629	3,842,132	2,162,605
FL	Putnam	Putnam	0.5595	1,219,157	682,129
VA	Richmond (City)	Bellemeade Power Station	0.5565	411,103	228,797

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
NJ	Hudson	Kearny Generating Station	0.5554	129,661	72,016
FL	Orange	Stanton A	0.5549	1,981,226	1,099,367
CA	Santa Clara	Gilroy Energy Center, LLC	0.5540	100,516	55,690
CA	Sacramento	SCA Cogen II	0.5540	705,274	390,702
WI	Dane	West Campus Cogeneration Facility	0.5529	160,885	88,949
NJ	Burlington	Burlington Generating Station	0.5513	132,886	73,264
AZ	Mohave	Black Mountain Generating Station	0.5494	101,473	55,748
CA	Los Angeles	Harbor Generating Station	0.5483	214,938	117,843
MS	Attala	Attala Generating Plant	0.5477	1,425,463	780,665
TX	Lamar	Paris Energy Center	0.5385	573,220	308,707
LA	Calcasieu	R S Cogen	0.5356	2,749,501	1,472,497
VA	Washington	Wolf Hills Energy	0.5332	160,369	85,511
TX	Lamar	Lamar Power (Paris)	0.5271	3,063,178	1,614,668
FL	Leon	Arvah B Hopkins	0.5251	901,372	473,275
NE	Lancaster	Salt Valley Generating Station	0.5246	134,429	70,520
VA	Louisa	Gordonsville Power Station	0.5227	350,249	183,090
VA	Prince William	Possum Point Power Station	0.5171	2,647,166	1,368,910
LA	Ouachita	Perryville Power Station	0.5168	1,888,068	975,695
TX	Ector	Quail Run Energy Center	0.5157	1,020,641	526,382
TX	Howard	C. R. Wing Cogeneration Plant	0.5152	386,803	199,281
NY	Albany	Bethlehem Energy Center (Albany)	0.5143	1,887,690	970,859
AL	Morgan	Decatur Energy Center	0.5122	1,500,430	768,472
MA	Middlesex	Kendall Square	0.5118	937,299	479,705
NV	Storey	Tracy	0.5108	2,103,514	1,074,518
CA	Stanislaus	Woodland Generation Station	0.5041	438,500	221,031
AR	Union	Union Power Station	0.5030	2,417,865	1,216,097
OR	Morrow	Coyote Springs	0.4968	2,758,265	1,370,192

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
MS	Panola	Batesville Generation Facility	0.4951	2,143,596	1,061,215
CA	Los Angeles	Carson Cogeneration Company	0.4948	346,764	171,564
NY	Cattaraugus	Indeck-Olean Energy Center	0.4921	285,156	140,332
MA	Bristol	Dartmouth Power	0.4915	150,441	73,939
CO	Denver	Arapahoe Combustion Turbine	0.4893	280,285	137,134
NV	Clark	Apex Generating Station	0.4877	2,450,239	1,195,035
TX	Lubbock	J Robert Massengale Generating Station	0.4863	294,627	143,272
MI	Jackson	Jackson MI Facility	0.4858	507,346	246,491
NM	San Juan	Bluffview Power Plant	0.4833	428,233	206,977
MA	Bristol	Dighton	0.4816	305,649	147,203
FL	Miami-Dade	Turkey Point	0.4803	7,490,893	3,597,990
TX	Wise	Wise County Power Company	0.4795	3,287,975	1,576,475
AZ	Pinal	Desert Basin Generating Station	0.4784	1,593,323	762,324
TX	Johnson	Johnson County Generation Facility	0.4778	1,469,345	702,028
FL	Osceola	Cane Island	0.4762	1,087,929	518,047
GA	Houston	Mid-Georgia Cogeneration	0.4754	117,762	55,983
CO	El Paso	Front Range Power Plant	0.4753	2,130,386	1,012,479
NY	Saratoga	Indeck-Corinth Energy Center	0.4740	782,070	370,710
MD	Prince George's	Panda Brandywine	0.4739	513,494	243,322
NY	Nassau	Bethpage Energy Center	0.4731	548,427	259,488
CA	Stanislaus	Walnut Energy Center	0.4727	1,620,472	766,044
TX	Chambers	Baytown Energy Center	0.4721	3,800,382	1,794,111
PA	Fayette	Fayette Energy Facility	0.4715	438,234	206,631
AL	Mobile	Hog Bayou Energy Center	0.4706	145,933	68,678
TX	Wharton	Colorado Bend Energy Center	0.4704	934,379	439,526
CA	Los Angeles	Haynes Generating Station	0.4702	4,237,785	1,992,764
TX	Webb	Laredo	0.4695	585,135	274,709

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
NM	San Juan	Milagro Cogeneration and Gas Plant	0.4685	872,512	408,781
FL	Orange	Orlando CoGen	0.4683	442,796	207,361
OH	Lawrence	Hanging Rock Energy Facility	0.4673	1,364,613	637,674
CA	Placer	Roseville Energy Park	0.4668	567,918	265,092
FL	Polk	Mulberry Cogeneration Facility	0.4667	445,294	207,812
LA	Caddo	Lieberman Power Plant	0.4660	104,714	48,792
OH	Washington	Washington Energy Facility	0.4648	329,775	153,278
CA	Los Angeles	Malburg Generating Station	0.4631	902,679	417,986
CA	Santa Clara	Donald Von Raesfeld	0.4622	359,577	166,196
GA	Murray	Murray Energy Facility	0.4607	1,287,686	593,212
MS	Benton	Magnolia Facility	0.4590	1,067,183	489,835
MN	Blue Earth	Mankato Energy Center	0.4575	415,548	190,102
AZ	Maricopa	APS West Phoenix Power Plant	0.4566	1,618,866	739,120
NM	Dona Ana	Afton Generating Station	0.4548	798,101	362,945
NY	Oswego	Independence	0.4544	1,186,180	539,051
IL	Rock Island	Cordova Energy Company	0.4542	153,420	69,679
LA	Evangeline	Evangeline Power Station (Coughlin)	0.4539	2,066,808	938,030
TX	Newton	Cottonwood Energy Project	0.4525	3,987,151	1,804,119
MO	Dunklin	St. Francis Power Plant	0.4517	701,435	316,837
AL	Morgan	Morgan Energy Center	0.4498	2,406,700	1,082,615
TX	Yoakum	Mustang Station	0.4491	1,516,741	681,193
CA	Monterey	Moss Landing	0.4483	7,410,787	3,322,124
LA	Ouachita	Ouachita Plant	0.4476	1,375,747	615,819
OK	Oklahoma	Redbud Power Plant	0.4467	3,336,480	1,490,469
CA	Kern	La Paloma Generating Plant	0.4463	6,384,312	2,849,251
WA	Klickitat	Goldendale Generating Station	0.4456	1,243,955	554,299
AZ	Maricopa	Santan	0.4445	4,130,047	1,835,948

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
AL	Autauga	Tenaska Lindsay Hill	0.4443	627,883	278,991
TX	Harrison	Harrison County Power Project	0.4440	912,703	405,259
OH	Washington	Waterford Plant	0.4437	295,240	130,992
OK	Wagoner	Oneta Energy Center	0.4434	2,301,778	1,020,618
AR	Hot Spring	Hot Spring Energy Facility	0.4424	1,403,681	621,013
UT	Utah	Nebo Power Station	0.4419	511,585	226,064
IL	Kendall	Kendall Energy Facility	0.4412	1,043,917	460,542
IA	Cerro Gordo	Emery Station	0.4405	936,094	412,356
TX	Ellis	Midlothian Energy	0.4401	5,306,762	2,335,632
TX	Travis	Sand Hill Energy Center	0.4400	1,567,524	689,782
IN	Vigo	Sugar Creek Generating Station	0.4395	177,974	78,222
LA	Acadia	Acadia Power Station	0.4386	866,536	380,054
VA	Fluvanna	Tenaska Virginia Generating Station	0.4385	1,488,010	652,424
WI	Ozaukee	Port Washington Generating Station	0.4376	1,794,137	785,058
MN	Ramsey	High Bridge	0.4376	490,220	214,504
TX	Jefferson	Exxonmobil Beaumont Refinery	0.4368	4,221,042	1,843,782
TX	Fort Bend	Brazos Valley Energy, LP	0.4364	2,968,541	1,295,332
CO	Weld	Fort St. Vrain	0.4363	4,525,541	1,974,329
FL	Saint Lucie	Treasure Coast Energy Center	0.4360	1,009,690	440,181
NM	Luna	Luna Energy Facility	0.4343	2,297,179	997,563
NH	Rockingham	NAEA Newington Energy LLC	0.4328	2,270,749	982,723
TX	Harris	Channel Energy Center	0.4320	3,344,837	1,444,847
FL	Polk	Osprey Energy Center	0.4320	2,126,715	918,649
AZ	Maricopa	Kyrene Generating Station	0.4318	1,000,361	431,948
TX	Rusk	Tenaska Gateway Generating Station	0.4311	3,362,130	1,449,403
ME	Oxford	Rumford Power	0.4310	944,841	407,238
CA	Santa Clara	Metcalf Energy Center	0.4310	3,268,251	1,408,514

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
TX	Nueces	Corpus Christi Energy Center	0.4298	3,363,398	1,445,475
RI	Newport	Tiverton Power	0.4295	1,493,892	641,675
WA	Cowlitz	Mint Farm Generating Station	0.4281	487,854	208,837
AZ	Maricopa	Redhawk Generating Facility	0.4280	4,275,608	1,830,028
OK	Mayes	Chouteau Power Plant	0.4279	1,939,013	829,768
NM	Lea	Hobbs Generating Station	0.4265	511,031	217,975
NY	Queens	Poletti 500 MW CC	0.4261	2,753,135	1,173,099
NV	Clark	Walter M. Higgins III Generating Station	0.4259	567,533	241,739
OK	Tulsa	Green Country Energy, LLC	0.4252	3,258,683	1,385,633
CA	Los Angeles	Valley Gen Station	0.4244	1,711,907	726,540
MN	Rice	Faribault Energy Park	0.4244	432,703	183,627
TX	San Patricio	Gregory Power Facility	0.4243	4,335,843	1,839,765
NV	Clark	Chuck Lenzie Generating Station	0.4231	7,077,727	2,994,591
TX	Grimes	Tenaska Frontier Generation Station	0.4227	4,865,503	2,056,848
PA	Northampton	Lower Mount Bethel Energy	0.4227	2,015,229	851,817
IL	Shelby	Holland Energy Facility	0.4227	395,856	167,323
NJ	Salem	Pedricktown Cogeneration Plant	0.4226	154,264	65,192
MA	Hampden	Berkshire Power	0.4217	1,149,049	484,592
NV	Clark	El Dorado Energy	0.4204	3,670,248	1,542,988
PA	Bucks	Fairless Energy, LLC	0.4189	4,268,530	1,788,192
AZ	Mohave	Griffith Energy Project	0.4185	1,662,074	695,601
OK	Pittsburg	Tenaska Kiamichi Generating Station	0.4184	5,519,479	2,309,527
WA	Clark	River Road	0.4182	1,656,605	692,805
CA	Kern	Pastoria Energy Facility	0.4176	5,079,441	2,121,276
WA	Pierce	Frederickson Power LP	0.4174	1,118,919	467,072
OR	Umatilla	Hermiston Power Plant	0.4168	3,808,589	1,587,554
CT	New Haven	Milford Power Company LLC	0.4160	2,813,417	1,170,344

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
FL	Polk	Orange Cogeneration Facility	0.4154	441,538	183,399
GA	Effingham	McIntosh Combined Cycle Facility	0.4153	5,238,225	2,175,350
LA	Iberville	Carville Energy Center	0.4134	2,213,673	915,221
CA	Sacramento	Sacramento Power Authority Cogen	0.4132	1,241,784	513,127
MN	Washington	Cottage Grove Cogeneration	0.4127	621,883	256,673
TX	Harris	Channelview Cogeneration Facility	0.4126	7,468,443	3,081,721
CO	Weld	Rocky Mountain Energy Center	0.4124	3,394,842	1,400,095
RI	Providence	Rhode Island State Energy Partners	0.4122	3,245,702	1,337,835
AZ	Maricopa	Arlington Valley Energy Facility	0.4120	1,012,507	417,171
AZ	Maricopa	Gila River Power Station	0.4120	8,355,218	3,442,328
MS	DeSoto	Southaven Combined Cycle	0.4111	1,974,788	811,919
WI	Outagamie	Fox Energy Company LLC	0.4103	638,179	261,837
ID	Kootenai	Rathdrum Power, LLC	0.4102	1,392,331	571,182
AZ	Mohave	South Point Energy Center, LLC	0.4100	2,833,815	1,161,949
NY	Greene	Athens Generating Company	0.4097	5,963,118	2,443,082
MA	Norfolk	Fore River Station	0.4087	3,019,735	1,234,178
TX	Guadalupe	Rio Nogales Power Project, LP	0.4080	3,051,445	1,244,979
TX	Harris	Deer Park Energy Center	0.4077	9,379,994	3,824,692
CA	Kern	Sunrise Power Company	0.4077	3,727,458	1,519,817
TX	Jack	Jack County Generation Facility	0.4073	3,241,870	1,320,345
MS	Lowndes	Caledonia	0.4073	2,478,406	1,009,359
AL	Washington	Washington County Cogen (Olin)	0.4070	1,393,272	567,103
CA	Contra Costa	Delta Energy Center, LLC	0.4068	4,960,917	2,018,136
TX	Ellis	Ennis-Tractebel Power Company	0.4065	1,560,601	634,427
AZ	Maricopa	Mesquite Generating Station	0.4059	8,302,900	3,369,814
AL	Mobile	Theodore Cogeneration	0.4058	1,736,252	704,536
OR	Klamath	Klamath Cogeneration Project	0.4057	2,332,123	946,055

**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

State	County	Facility	Tons of CO <sub>2</sub> per MWh <sup>2</sup>	Total MWh (Gross Load)	Total Tons of CO <sub>2</sub>
AL	Lowndes	SABIC Innovative Plastics - Burkville	0.4056	794,096	322,088
CA	San Diego	Palomar Energy	0.4051	3,665,024	1,484,780
PA	Berks	Ontelaunee Energy Center	0.4036	1,502,472	606,436
WI	Jefferson	Whitewater Cogeneration Facility	0.4034	1,030,470	415,709
TX	Hidalgo	Magic Valley Generating Station	0.4025	3,504,432	1,410,626
AR	Jefferson	Pine Bluff Energy Center	0.4008	1,212,405	485,909
OR	Columbia	Port Westward	0.4003	2,892,983	1,158,040
MS	Choctaw	Choctaw Gas Generation, LLC	0.4000	1,719,144	687,693
CA	San Bernardino	Mountainview Power Company, LLC	0.3991	7,221,223	2,882,188
AR	Mississippi	Dell Power Plant	0.3969	232,508	92,272
AL	Lee	Plant H. Allen Franklin	0.3968	5,477,334	2,173,606
NJ	Union	Linden Cogeneration Facility	0.3964	2,092,787	829,604
AR	Hot Spring	Hot Spring Power Co., LLC	0.3955	2,230,815	882,252
CA	Contra Costa	Los Medanos Energy Center, LLC	0.3953	3,504,892	1,385,466
WI	Rock	Riverside Energy Center, LLC	0.3942	1,051,550	414,555
ME	Cumberland	Westbrook Energy Center	0.3922	2,779,383	1,090,087
CA	Kern	Elk Hills Power	0.3889	3,605,314	1,402,065
CA	Sutter	Calpine Sutter Energy Center	0.3883	3,130,968	1,215,631
AL	Autauga	E B Harris Generating Plant	0.3867	2,922,732	1,130,149
UT	Juab	Currant Creek Power Project	0.3848	2,866,303	1,102,905
UT	Utah	Lake Side Power Plant	0.3832	2,955,266	1,132,318
TX	Harris	Pasadena Power Plant	0.3769	4,148,421	1,563,624
SC	Calhoun	Columbia Energy Center (SC)	0.3765	418,317	157,477
AR	Pulaski	Oswald Generating Station	0.3680	297,211	109,360
NY	Queens	Astoria Energy	0.3622	2,674,021	968,626
CA	Los Angeles	Magnolia	0.3398	1,626,221	552,558
LA	Iberville	Plaquemine Cogen Facility	0.3357	5,889,394	1,976,804



**APPENDIX C - FACILITIES THAT EMIT THE MOST CO<sub>2</sub> RELATIVE TO ELECTRICITY GENERATED - 2008<sup>1</sup>**

<b>State</b>	<b>County</b>	<b>Facility</b>	<b>Tons of CO<sub>2</sub> per MWh<sup>2</sup></b>	<b>Total MWh (Gross Load)</b>	<b>Total Tons of CO<sub>2</sub></b>
MO	Cass	Dogwood Energy Facility	0.2531	972,358	246,111
CA	Santa Clara	Calpine Gilroy Cogen, LP	0.2105	267,047	56,211
CO	Adams	Blue Spruce Energy Center	0.0741	410,173	30,411

<sup>1</sup> This table includes only facilities that reported 100,000 MWh or more in 2008.

<sup>2</sup> EIP derived "Tons of CO<sub>2</sub> per MWh" by dividing "Total Tons of CO<sub>2</sub>" by "Total MWh (Gross Load)". Some facilities did not report any CO<sub>2</sub> emissions and/or gross load (i.e., electric generation). Facilities that failed to report emissions or electric generation were excluded from this analysis.

**APPENDIX D - REPORTED POWER PLANT CO<sub>2</sub>  
EMISSIONS AND ELECTRICITY GENERATED BY STATE**

<b>State</b>	<b>Total MWh (Gross Load)</b>	<b>Total Tons of CO<sub>2</sub></b>
AL	101,842,208	89,415,249
AR	35,399,216	32,250,348
AZ	85,948,712	66,277,581
CA	88,358,342	42,464,346
CO	49,106,853	45,233,707
CT	9,624,637	7,025,897
DC	66,223	54,231
DE	6,355,968	6,145,756
FL	151,047,988	123,214,351
GA	102,266,677	94,130,740
IA	42,667,235	45,738,556
ID	1,621,358	722,128
IL	104,345,147	110,246,121
IN	132,214,596	131,041,343
KS	39,330,170	40,464,397
KY	94,428,229	101,394,048
LA	62,675,216	47,245,278
MA	28,311,477	20,724,245
MD	28,823,413	27,311,068
ME	6,925,817	3,607,536
MI	68,003,367	75,940,512
MN	35,359,820	38,012,630
MO	76,688,538	74,803,304
MS	32,918,187	29,503,601
MT	19,671,641	21,770,385
NC	67,644,206	75,678,980
ND	30,212,177	35,096,897
NE	23,625,164	24,780,150
NH	9,524,193	7,530,388
NJ	18,233,690	14,063,521
NM	37,056,058	32,827,511
NV	27,757,989	17,763,481
NY	58,695,398	42,235,447
OH	135,299,821	133,008,509
OK	67,025,691	54,754,454
OR	18,510,500	10,958,004
PA	123,531,469	116,556,148
RI	6,470,881	3,292,518

**APPENDIX D - REPORTED POWER PLANT CO<sub>2</sub>  
EMISSIONS AND ELECTRICITY GENERATED BY STATE**

<b>State</b>	<b>Total MWh (Gross Load)</b>	<b>Total Tons of CO<sub>2</sub></b>
SC	46,457,111	43,299,661
SD	3,977,013	4,235,164
TN	60,471,929	59,717,649
TX	313,487,035	261,049,175
UT	42,525,542	38,041,454
VA	34,528,251	34,174,298
VT	284,357	440,117
WA	16,031,770	13,864,916
WI	47,466,559	49,953,119
WV	93,657,082	88,261,067
WY	46,735,768	50,658,163
<b>TOTAL:</b>	<b>2,733,210,689</b>	<b>2,486,978,147</b>