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## **New Report Reveals States and Utilities with Highest and Lowest Power Plant Emissions; Overall U.S. Emissions Decline**

*Latest data on top 100 power producers show significant declines in SO<sub>2</sub>, NO<sub>x</sub> and moderate CO<sub>2</sub> reductions*

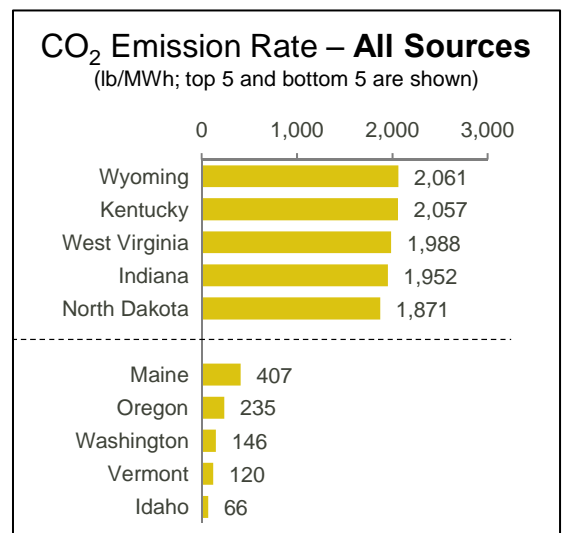
**BOSTON – May 15, 2013** – A major new report on U.S. power plant emissions from the top 100 power producers shows that the electric industry cut emissions of NO<sub>x</sub>, SO<sub>2</sub> and CO<sub>2</sub> in 2011 even as overall electricity generation increased, largely due to increased use of natural gas and growing reliance on renewable energy.

Based on the latest available data, the report also reveals that Wyoming, Kentucky, West Virginia, Indiana, and North Dakota had the highest CO<sub>2</sub> emissions per megawatt-hour of power produced, while Idaho, Vermont, Washington, Oregon, and Maine had the lowest CO<sub>2</sub> emissions rates. Nationwide, five power producers—American Electric Power, Duke Energy, FirstEnergy, Southern Company, and Tennessee Valley Authority—generate 25 percent of overall electric sector CO<sub>2</sub> emissions, though some of these producers and others have significantly reduced emissions in recent years.

The [Benchmarking Air Emissions](#) report is the ninth in a series highlighting environmental performance and progress in the nation's electric power sector. Traditionally, the report has been published every two years. However, in light of ongoing changes within the industry, in terms of plant retirements, pollution control retrofits and new emissions regulations under consideration, a streamlined version of the report was prepared this year, based on 2011 generation and emissions data from the Energy Information Administration and the Environmental Protection Agency.

Key findings of the report include:

- In 2011, power plant **NO<sub>x</sub> and SO<sub>2</sub> emissions** were 70 percent and 72 percent lower, respectively, than they were in 1990 when Congress passed major amendments to the Clean Air Act.
- Since 1990, power plant **CO<sub>2</sub> emissions** have increased by 20 percent, although CO<sub>2</sub> emissions declined 7 percent from 2008 through 2011.
- There is wide variation in CO<sub>2</sub> emission rates across the 50 states, as noted in the report's new state-by-state emissions summary. **States with the highest CO<sub>2</sub> emission rates were heavily reliant on coal:** Wyoming and Kentucky, the states with the highest CO<sub>2</sub> emission rates, relied on coal for 86 and 93 percent of their power generation, respectively.



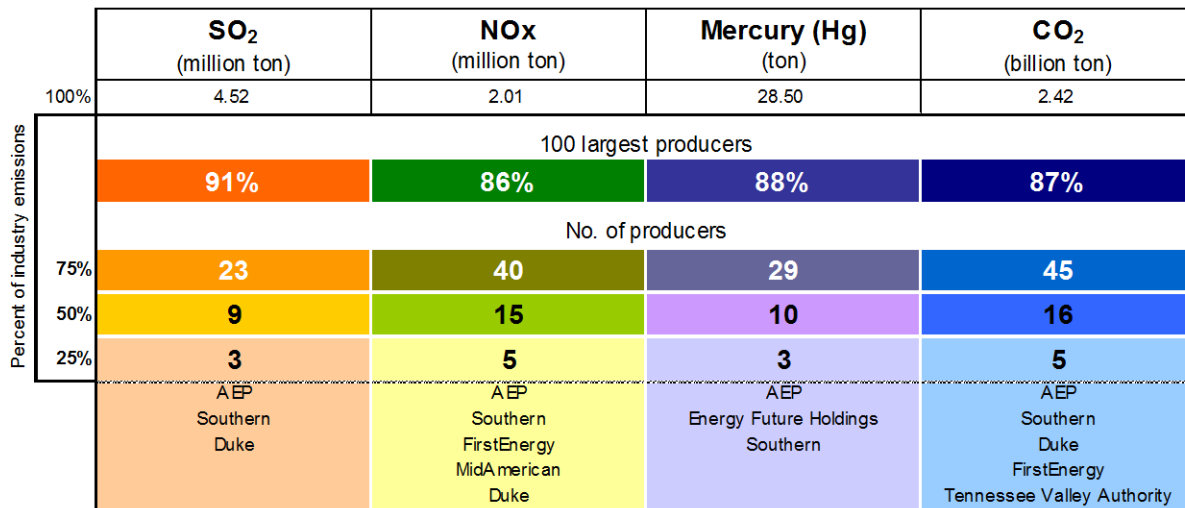
- Coal accounted for 44 percent of the power produced by the 100 largest companies in 2011, followed by natural gas (23 percent), nuclear (22 percent), hydroelectric power (8 percent), non-hydroelectric renewables and other fuel sources (3 and 1 percent, respectively), and oil (less than 0.2 percent).
- From 2000 to 2011, natural gas generation increased 69 percent industry-wide, while renewable generation increased 44 percent. Coal-fired generation dropped 12 percent over the same period.

“The electric power industry is moving to cleaner sources of energy, demonstrating that cleaner power generation is achievable. Stronger regulations will reinforce those trends and stimulate further investment in low-carbon, low-risk resources like renewable power and energy efficiency,” said **Mindy Lubber, president of Ceres**, which sponsored the report with NRDC, Entergy Corporation, Exelon, Pacific Gas and Electric Company, PSEG, Tenaska and Bank of America. M.J. Bradley & Associates authored the report.

“The Benchmarking Air Emissions report is an important resource for following changes in the U.S. electric power sector,” said **Chuck Barlow, Vice President, Environmental Strategy and Policy for Entergy Corporation**. “The rise of natural gas is a game-changer for U.S. power plant emissions, as this year’s analysis shows. At Entergy, our focus has long been on providing value to all of our stakeholders while maintaining our commitment to environmentally responsible action. A diverse generation portfolio helps us get there.”

Each edition of the *Benchmarking Air Emissions* report analyzes the latest emissions from the 100 largest power producers in the U.S. In 2011, the year covered in this edition of the report, the top 100 power producers together accounted for 86 percent of the electricity produced. The 100 largest power producers emitted approximately 4.1 million tons of SO<sub>2</sub>, 1.7 million tons of NO<sub>x</sub>, 25 tons of mercury, and 2.1 billion tons of CO<sub>2</sub> in aggregate during 2011.

Air pollution emissions from power plants, while declining overall, are highly concentrated among a small number of power producers. For example, nearly a quarter of the electric power industry’s SO<sub>2</sub> and CO<sub>2</sub> emissions come from just three and five top producers, respectively, as illustrated in summary slides available for download at [mjbradley.com/benchmarking-air-emissions](http://mjbradley.com/benchmarking-air-emissions).



The report also provides company-specific emissions trend information from 2000 through 2011 for the four largest power generators, illustrating the range of approaches that power companies have used to reduce emissions:

- **AEP** reduced its total SO<sub>2</sub> emissions by 52 percent between 2000 and 2011, from 1.1 million tons to just over half a million tons, primarily by adding scrubbers to approximately 7,900 megawatts of coal-fired generating capacity.
- **Southern Company** reduced total SO<sub>2</sub> emissions by 63 percent while increasing overall generation by 8 percent between 2000 and 2011 by bringing online approximately 14,000 megawatts of natural gas-fired capacity during the same period.
- **NextEra Energy** added more than 20,000 megawatts of wind, solar, and natural gas-fired generating capacity between 2000 and 2011, and nearly doubled its total power generation, driving down its CO<sub>2</sub> emissions rate from 1,023 to 603 pounds per megawatt hour, a 41 percent improvement.
- Among the top 100 power producers, **Exelon** had the eighth lowest CO<sub>2</sub> emissions rate in 2011, largely due to its large nuclear and renewable energy fleet, as well as its investments in nuclear uprates. Even with a low level of emissions, Exelon reduced its total CO<sub>2</sub> emissions by 32 percent and its CO<sub>2</sub> emission rate by 40 percent between 2000 and 2011.

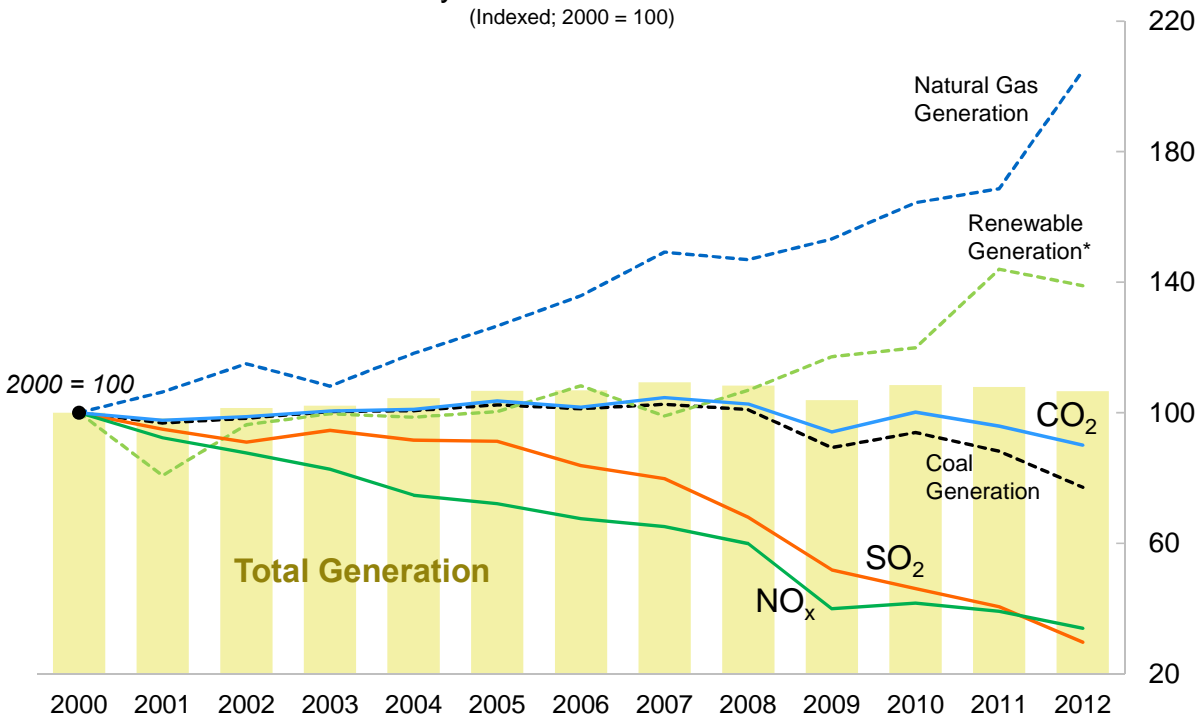
“Power plants are America’s largest source of global warming pollution. The good news is that their emissions have declined significantly since their peak in 2007, but we still have a long way to go. The Benchmarking Report provides a valuable scorecard, allowing citizens and policymakers to compare the performance of individual companies against others in this critical industry,” said **Dan Lashof, Program Director of Climate and Clean Air at the Natural Resources Defense Council.**

“Today’s report highlights the credit due to policy leaders in New Jersey and at the federal level for adopting policies that have reduced power plant emissions. The progress made in New Jersey can, and should, be a model for policymakers across the country,” said **Geraldine Smith, PSEG’s General Environmental Counsel and Managing Director Environmental Policy.** “By investing more than \$3 billion in our New Jersey power plants since 2005, PSEG has been able to reduce emissions of NO<sub>x</sub>, SO<sub>2</sub> and mercury by more than 90 percent, while increasing output of electricity. We look forward to participating in future discussions on cost-effective ways to improve air quality in our home state and across the nation.”

The 2013 *Benchmarking Air Emissions* report’s comparative analysis of emissions data is relevant to policymakers considering regulatory approaches; public interest organizations concerned about public health and consumer costs; and financial analysts and investors assessing company risk exposure as power plant emission limits in the U.S. gain more momentum.

The report is available for download at [ceres.org](http://ceres.org), [nrdc.org](http://nrdc.org), and [mjbradley.com](http://mjbradley.com). In addition to the aggregate corporate emissions data for 2011 provided in this report, plant-specific data for 2011 are now available for download at [mjbradley.com](http://mjbradley.com).

## Annual Electricity Generation and Emission Trends (Indexed; 2000 = 100)



\*Includes hydroelectric, wind, solar, biomass, geothermal and other renewable sources

### For more information:

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### About Ceres

Ceres is an advocate for sustainability leadership. Ceres mobilizes a powerful coalition of investors, companies and public interest groups to accelerate and expand the adoption of sustainable business practices and solutions to build a healthy global economy. Ceres also directs the Investor Network on Climate Risk (INCR), a network of 100 institutional investors with collective assets totaling more than \$10 trillion. For more information, visit <http://www.ceres.org>

### About NRDC

The Natural Resources Defense Council (NRDC) is an international nonprofit environmental organization with more than 1.3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Livingston, Montana, and Beijing. Visit us at [www.nrdc.org](http://www.nrdc.org) and follow us on Twitter @NRDC.

### About Bank of America

Bank of America's commitment to corporate social responsibility (CSR) is a strategic part of doing business globally. Our CSR efforts guide how we operate in a socially, economically, financially and environmentally responsible way around the world, to deliver for shareholders, customers, clients and employees. Our goal is to help create economically vibrant regions and communities through lending, investing and giving. By partnering with our stakeholders, we create value that empowers individuals and communities to thrive and contributes to the long-term success of our business. We

have several core areas of focus for our CSR, including responsible business practices; environmental sustainability; strengthening local communities with a focus on housing, hunger and jobs; investing in global leadership development; and engaging through arts and culture. As part of these efforts, employee volunteers across the company contribute their time, passion and expertise to address issues in communities where they live and work. Learn more at [www.bankofamerica.com/about](http://www.bankofamerica.com/about) and follow us on Twitter at @BofA\_Community.

### **About Entergy Corporation**

Entergy Corporation, which celebrates its 100th birthday this year, is an integrated energy company engaged primarily in electric power production and retail distribution operations. Entergy owns and operates power plants with approximately 30,000 megawatts of electric generating capacity, including more than 10,000 megawatts of nuclear power, making it one of the nation's leading nuclear generators. Entergy delivers electricity to 2.8 million utility customers in Arkansas, Louisiana, Mississippi and Texas. Entergy has annual revenues of more than \$10 billion and approximately 15,000 employees.

### **About Exelon**

Exelon Corporation (NYSE: EXC) is the nation's leading competitive energy provider, with 2012 revenues of approximately \$23.5 billion. Headquartered in Chicago, Exelon has operations and business activities in 47 states, the District of Columbia and Canada. Exelon is one of the largest competitive U.S. power generators, with approximately 35,000 megawatts of owned capacity comprising one of the nation's cleanest and lowest-cost power generation fleets. The company's Constellation business unit provides energy products and services to approximately 100,000 business and public sector customers and approximately 1 million residential customers. Exelon's utilities deliver electricity and natural gas to more than 6.6 million customers in central Maryland (BGE), northern Illinois (ComEd) and southeastern Pennsylvania (PECO).

### **About Pacific Gas and Electric Company**

Pacific Gas and Electric Company, a subsidiary of [PG&E Corporation](http://www.pge.com) (NYSE:PCG), is one of the largest combined natural gas and electric utilities in the United States. Based in San Francisco, with 20,000 employees, the company delivers some of the nation's cleanest energy to 15 million people in Northern and Central California. For more information, visit <http://www.pge.com/about/newsroom/> and [www.pgecurrents.com](http://www.pgecurrents.com).

### **About PSEG**

Public Service Electric and Gas Company (PSE&G) is New Jersey's oldest and largest regulated gas and electric delivery utility, serving nearly three-quarters of the state's population. PSE&G is the winner of the ReliabilityOne Award for superior electric system reliability. PSEG Power is a major unregulated independent power producer in the U.S. with three main subsidiaries: PSEG Fossil, PSEG Nuclear, and PSEG Energy Resources and Trade. PSEG Power operates one of the most balanced portfolios in the country, both in terms of fuel mix and market segment (base load units, load following units and peaking units) and is committed to operational excellence. PSE&G and PSEG Power are subsidiaries of Public Service Enterprise Group Incorporated (PSEG) (NYSE:PEG), a diversified energy company ([www.pseg.com](http://www.pseg.com)).

### **About Tenaska**

Tenaska, based in Omaha, Neb., is one of the leading independent power producers in the U.S. Tenaska and its affiliates manage operations for approximately 11,000 megawatts (MW) of power generation consisting of 14 power plants, seven of which are owned by Tenaska in partnership with other companies and seven of which are private equity investments managed by affiliate Tenaska

Capital Management, LLC. Tenaska's affiliates operate nine power plants in seven states totaling approximately 6,500 MW of generating capacity. For more information about Tenaska, visit the company's website at [www.tenaska.com](http://www.tenaska.com).

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