
BOSTON (June 20, 2018) – The nation’s largest electricity producers continue to transition to clean energy sources and, correspondingly, reduce air pollutant emissions, including contributors to climate change, according to the latest comprehensive analysis of U.S. power plant emissions, Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States.

The analysis notes that this shift has been accompanied by a decoupling of economic growth and carbon emissions; from 2005 to 2017, electric sector CO2 emissions decreased 24 percent while GDP grew by 20 percent. Power plant emissions of other air pollutants such as sulfur dioxides (SO$_2$), nitrogen oxides (NO$_x$) and mercury also continued to decline.

According to the analysis, coal and natural gas accounted for 49 and 20 percent, respectively, of electric power production in 2006. Only a decade later, a significant shift in market dynamics is evident: in 2016, 30 percent of electric power came from coal, while 34 percent came from natural gas—marking the first time that natural gas overtook coal as the largest source of electricity in the U.S.

In terms of renewable energy, in 2016, 13.5 percent of electricity came from renewable sources like wind, solar and hydropower—a figure which rose to 17.1% in 2017. The percentage of the U.S. electricity generation mix derived from renewable sources is expected to continue rising as the cost of renewables continues to decline, as illustrated in Ceres’ recent report, In Sight of the Clean Trillion: Update on an Expanding Landscape of Investor Opportunities.
“It is encouraging to see the progress that electric power companies have made in accelerating the transition to the clean energy economy, especially given the increased role that the sector will need to play to achieve our longer-range decarbonization goals,” said Dan Bakal, director of electric power at Ceres.

Other key findings include:

- In 2015, the first federal limits on mercury and other hazardous air pollutants from coal-fired power plants went into effect. These regulations have contributed to an 86 percent decrease in power plant mercury emissions from 2000 levels.

- In aggregate, in 2016 the 100 largest power producers emitted approximately 1.26 million tons of sulfur dioxide, 1.01 million tons of nitrogen oxides, 5.26 tons of mercury, and 1.70 billion tons of carbon dioxide, the leading contributor to climate change.

- In addition to ranking electric power companies, the report also ranks power plant carbon dioxide emissions by state. In 2016, power plants in Wyoming, West Virginia, Kentucky, Indiana and Missouri had the highest carbon dioxide emissions rates and power plants in Maine, New Hampshire, Washington, Idaho, and Vermont had the lowest.

This data is among that presented in the 14th edition of Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States, which the sustainability nonprofit organization Ceres and partner organizations, including Natural Resources Defense Council (NRDC), have released since 1997. The analyses are based on publicly reported generation and emissions data from the U.S. Energy Information Administration (EIA) and the U.S. Environmental Protection Agency (EPA). For the first time, the analysis' power plant data has also been compiled into an interactive air emissions benchmarking data map and an interactive emissions and generation trend map. Additional report resources, including data tables and past reports, are available here.

The analysis draws on 2016 emissions data for carbon dioxide (CO₂), nitrogen oxide (NOx), sulfur dioxide (SO₂) and mercury from the nation’s 100 largest electric power producers. The report ranks these electric power producers based on total emissions and emissions rates, and also provides an overview of emissions for the sector, finding that sulfur dioxide and nitrogen oxide emissions were 91 and 82 percent lower, respectively, than they were in 1990 when Congress passed major amendments to the Clean Air Act.

“The continued decline of harmful climate and air pollution clearly demonstrates that the Clean Air Act and other federal air pollution standards work. They are delivering substantial health and environmental benefits to millions of Americans while the economy continues to grow, and homes and businesses across the country continue to
count on a reliable electricity supply,” said Starla Yeh, director of the Policy Analysis Group of the Climate and Clean Energy program at NRDC. “Furthermore, the shift to clean energy is gaining momentum, and that will only further benefit our health, economy and future.”

Carbon dioxide emissions from power plants in 2016 were similar (one percent higher) to 1990 levels. Carbon dioxide emissions from power plants rose steadily from 1990 through 2005 and have fallen 24 percent from 2005 through 2016, in part due to improvements in energy efficiency and the displacement of coal by natural gas and renewable energy resources.

“The emissions benchmarking report, led by Ceres and NRDC, is critical as it helps us track our progress, both as an industry and country, toward meeting important clean air goals,” said Exelon Senior Vice President, Corporate Strategy and Chief Innovation and Sustainability Officer Chris Gould. “We are encouraged to see continued decreases in emissions from power plants, and we are proud, as the largest producer of emissions-free energy, to contribute to the nation’s clean air progress.”

The analysis attributes all power generation and emissions to the owner of an asset, not to purchasers of the asset’s output or to counterparties to the contracts, as publicly available data do not allow the accurate and exhaustive tracking of such agreements.

The benchmarking analysis is a collaborative effort between Ceres; Bank of America; power producers Entergy and Exelon; and the Natural Resources Defense Council (NRDC). It is authored by M.J. Bradley & Associates.

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About Ceres

Ceres is a sustainability nonprofit organization working with the most influential investors and companies to build leadership and drive solutions throughout the economy. Through powerful networks and advocacy, Ceres tackles the world’s biggest sustainability challenges, including climate change, water scarcity and pollution, and human rights abuses. For more information, visit www.ceres.org and follow @CeresNews.

About Entergy Corporation

Entergy Corporation 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 nearly 9,000 megawatts of nuclear power. Entergy delivers electricity to 2.9 million utility customers in Arkansas, Louisiana, Mississippi and Texas. Entergy has annual revenues of approximately $11 billion and more than 13,000 employees. For more information, visit www.entergy.com and follow @Entergy.

About Exelon

Exelon Corporation (NYSE: EXC) is a Fortune 100 energy company with the largest number of utility customers in the U.S. Exelon does business in 48 states, the District of Columbia and Canada and had 2016 revenue of $31.4 billion. Exelon’s six utilities deliver electricity and natural gas to approximately 10 million customers in Delaware, the District of Columbia, Illinois, Maryland, New Jersey and Pennsylvania through its Atlantic City Electric, BGE, ComEd, Delmarva Power, PECO and Pepco subsidiaries. Exelon is one of the largest competitive U.S. power generators, with more than 33,300 megawatts of nuclear, gas, wind, solar and hydroelectric generating 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 2.2 million residential, public sector and business customers, including more than two-thirds of the Fortune 100. Follow Exelon on Twitter @Exelon.

About the Natural Resources Defense Council (NRDC)

The Natural Resources Defense Council (NRDC) is an international nonprofit environmental organization with more than 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, Bozeman, MT, and Beijing. Visit us at www.nrdc.org and follow us on Twitter @NRDC.