

A!ert



March 2022

Alert is a monthly update on transportation and air quality planning activities in the Delaware Valley.



Air Quality Regulations

Power Plant Emissions Continue Historic Decline, Despite Increase from 2020 Levels

On February 18, 2022, the U.S. Environmental Protection Agency (EPA) released their report on annual emissions of nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon dioxide (CO₂), and mercury from power plants in the lower 48 states for 2021. The data showed that emissions in 2021 were higher than 2020. Coal-fired power generation was responsible for the increase in emissions as natural gas prices and energy demand grew with the nation's economic recovery from the COVID-19 pandemic. When compared to 2019, 2021 emissions fell between three and eleven percent, continuing the historic trend of decreasing annual power plant emissions.

According to the EPA, the 2021 data show a six percent increase in NO_x emissions, a twenty percent increase in SO₂ emissions, a seven percent increase in CO₂ emissions, and a thirteen percent increase in mercury emissions compared to 2020. Additionally, NO_x emissions increased by five percent during the May 1 to September 30 ozone season. Overall, based on the first eleven months of 2021, electricity demand increased by three percent compared to 2020.

"The 2021 increase in coal-fired generation and resulting rise in air pollution shows how important it is to urgently forge ahead in building and supporting a cleaner power sector," said EPA Administrator Michael S. Regan. "Thanks in part to EPA rules and policies, we have made great progress in lowering dangerous pollution over the last several decades. But it's clear our work is far from done, as we deliver on our commitment to protect the health of everyone and especially those most vulnerable among us."

Between 1990 and 2021, annual emissions of SO₂ from power plants fell by 94 percent and annual emissions of NO_x from power plants fell by 88 percent. While complying with programs to reduce SO₂, NO_x and mercury, CO₂ emissions from power plants dropped by 21 percent between 1995 and 2021.

The EPA attributes long-term declines in emissions to changes in the mix of fuels used in electricity generation, including both natural gas and renewable energy sources. While data from 2021 showed a one-year, sixteen percent increase in coal generation and a three percent decrease in natural gas generation, there is a shift underway from higher emitting to lower and zero emitting generation.

Reductions in emissions from all sources protect public health. NO_x and SO₂ emissions contribute to the formation of ground-level ozone and fine particulate matter (PM_{2.5}), which can lead to respiratory and cardiovascular problems. Exposure



Save the Date

Friday
March 25, 2022

**Deadline for Applications:
US EPA Enhanced Air Quality
Monitoring Grants**

For more information,
please visit:

www.grants.gov
and search
"EPA-OAR-OAQPS-22-01"

Friday
May 13, 2022

**Deadline for Applications:
NJDEP
DC Fast Charger Community
Grant Program**

For more information,
please visit:

nj.gov/dep/drivegreen
and search
"DC Fast Charge Grants"

to mercury affects the nervous system and brain functions, particularly in infants and children, and is known to cause additional significant health effects.

See more information on the [EPA's emissions data](#) on power generation.



Air Quality News

Recent Studies Support Link Between Pediatric Asthma and Emissions from Transportation

Environmental and occupational health researchers from the George Washington University have published two studies linking the new pediatric asthma cases to Nitrogen Dioxide (NO₂). The studies indicate that almost two million new cases of pediatric asthma around the globe can be linked to this pollutant and that the problem is exacerbated in urban areas.

NO₂ is emitted from the burning of fossil fuels from transportation sources, as well as power generation and industry. NO₂ can harm lungs directly but is also a precursor pollutant for ground-level ozone and fine particle pollution (PM_{2.5}). Due to its relationship to transportation sources, NO₂ levels can be higher in urban areas that have more vehicles and greater levels of traffic congestion.

The researchers found that nearly two thirds of the new pediatric asthma cases occurred in urban areas and the rate of cases linked to NO₂ pollution is growing in developing countries—while it is declining in the United States and Europe. The researchers attribute the improvement in asthma cases in first world countries to stricter emissions regulations and clean vehicle technologies that are not required or not readily accessible in developing nations.

According to Susan Anenberg, co-lead author of the study, "Reducing fossil fuel-powered transportation can help children and adults breathe easier and may pay big health dividends, such as fewer cases of pediatric asthma and excess deaths. At the same time, it would also reduce greenhouse gas emissions, leading to a healthier climate."

George Washington University hosts a data visualization tool where the public can view NO₂ and PM_{2.5} levels for over 13,000 cities around the world. The tool relies on satellite imagery to predict pollutant levels in one square kilometer grids and presents information on pollutant concentrations and health impacts from 2000 to 2019.

Visit the George Washington University's Urban Air Quality [website](#).

NJDEP Announces New Funding for Community DC Fast Charging Infrastructure

The New Jersey Department of Environmental Protection (NJDEP) is offering funding to install DC Fast Charging Stations (DCFS) for electric vehicles in communities across New Jersey.

The program makes \$4 million available to fund grants up to \$200,000 per location. Charging locations must be publicly accessible and eligible applicants include owners of multi-unit housing units, businesses, local governments, non-profit organizations, and educational institutions.

NJDEP has developed a mapping tool that uses the grant program selection criteria to identify suitable locations for publicly accessible DCFS. The grant program opens on March 14, 2022 and will close on May 13, 2022.

Learn more about the [NJDEP Community DCFS Grant Program](#).



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