



## **Air Quality Regulations**

U.S. Environmental Protection Agency Finalizes the "Good Neighbor Rule" to Reduce Emissions from Western Power Plants Travelling East

On March 15, 2023, the U.S. Environmental Protection Agency (EPA) finalized a rule forcing factories and power plants in 23 western and midwestern states to control Nitrogen Oxide (NO<sub>x</sub>) and fine particle pollution (PM<sub>2.5</sub>) emissions that impact air quality in downwind states in the eastern U.S.  $NO_x$  is a major component of ozone pollution and contributes to the formation of  $PM_{2.5}$ . Both ozone and  $PM_{2.5}$  are linked to asthma, lung disease, and even premature deaths.

The regulation, known as the "good neighbor" or interstate transport rule, strengthens and expands an earlier interstate air pollution standard that was enacted during the Obama administration. The earlier rule required power plants to reduce emissions and this rule places similar controls on iron and steel mills, cement kilns, factories, and other industrial facilities.

EPA Administrator Michael Regan explains that "Air pollution doesn't stop at the state line. This step will help our state partners meet air quality health standards, saving lives and improving public health in smog-affected communities across the United States."

Pollutants from industrial facilities are carried by prevailing winds toward eastern states, causing higher levels of pollution in states with fewer industries. The tighter rules on power plants will be in effect later this year, while the new controls on factories and other industrial polluters will take effect in 2026.

The revised good neighbor rule is one of a number of climate and clean air regulations expected to be announced by the Biden administration this year. This package of rules is designed to strengthen clean air and climate protections that had been rolled back by the Trump administration, and to accelerate the nation's transition away from fossil fuels and toward renewable energy.

The EPA estimates that the updated good neighbor rule will cut emissions of  $NO_x$  in the affected states by 50 percent from 2021 levels by 2027; prevent 1,300 premature deaths; avoid more than 2,300 hospital and emergency room visits; prevent 1.3 million cases of asthma; and avoid 430,000 lost school days and 25,000 missed workdays.

Advocates of the new rule praise the rule's efforts to reduce air pollution and its impacts in states far from where the pollution is produced. Many states in the northeast along the I-95 corridor have claimed that meeting the National Ambient Air Quality Standards with emissions controls within their borders is significantly more difficult when a significant portion of those emissions originate from upwind states.



Tuesday May 30, 2023

Federal Highway
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**Applications Due** 

Information is available at: fhwa.dot.gov

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Clean Fleet EV Incentive Program

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njcleanenergy.com

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According to Senator Tom Carper of Delaware "In Delaware, more than 90 percent of our air pollution comes from outside our state," and Senator Carper expects that this rule will have quantifiable benefits for his state's air quality.

Opponents of the rule cite the costs of emissions controls on manufacturing facilities, especially those that are ramping up to provide materials needed for projects funded by the Bipartisan Infrastructure Law. Coal power and industry advocates claim that the cement and iron manufacturers would feel the brunt of this regulation at a time when those products are in increasing demand because of a recent influx of federal investments in road and bridge construction.

The EPA estimates the cost of complying with the revised rule to be about \$910 million annually from 2023 to 2042, while the net economic benefits of the associated public health gains would be up to \$13 billion each year over the same time period.

Read more about the EPA's Revised Good Neighbor Plan at www.epa.gov.



## **Air Quality and Transportation**

US Department of Energy Announces \$750 Million to Clean Hydrogen Fuel Research

On March 15, the U.S. Department of Energy (DOE) announced the first round of funding under the Bipartisan Infrastructure Law dedicated to improving the economic viability of clean hydrogen. The \$750 million will be administered by DOE's Hydrogen and Fuel Cell Technologies Office to help develop supply chains and manufacturing capacity both for the fuel cells that convert hydrogen to electricity and electrolyzers that split water to produce hydrogen using electricity. These components can be used in conjunction with low carbon sources of electricity to produce clean hydrogen which has the promise to provide economical energy storage to compliment intermittent power sources like wind and solar as well as directly power zero emissions vehicles.

Reducing the cost of hydrogen from renewable sources is the focus of DOE's Hydrogen Shot initiative which aims to achieve a cost of \$1 per kilogram of clean hydrogen within a decade of its June 2021 launch. Currently, hydrogen from renewable sources currently costs about \$5 per kilogram.

The Biden administration highlighted the importance of clean hydrogen technology to achieving its long-term goals of a totally clean electric grid by 2035 and net-zero carbon emissions by 2050. "Making clean hydrogen from abundant renewable energy provides America with yet another incredibly powerful fuel for many different applications, from low-emissions use in the construction and manufacturing industries to energy storage to powering our cars and trucks," said U.S. Secretary of Energy Jennifer M. Granholm.

Currently, 95% of the hydrogen produced in the United States is not produced using electrolysis but rather a chemical process known as steam-methane reforming that utilizes the methane contained in natural gas to produce the hydrogen gas. While this process is economical, it is non-renewable and emits carbon. Most of this hydrogen is used in industrial processes such as petroleum refining rather than energy storage.

The \$7 billion Regional Clean Hydrogen Hubs program hopes to address gaps in hydrogen infrastructure by establishing six to ten clean hydrogen hubs across the country that will create regional networks of hydrogen producers, consumers, and connective infrastructure. Tax incentives passed as part of the Inflation Reduction Act are also intended to support the adoption and innovation of hydrogen technology.

To read more about the <u>U.S. DOE Hydrogen Shot</u> and <u>Hydrogen Hub</u> programs, please visit <u>www.energy.gov</u>.



DVRPC, 8th Floor 190 N. Independence Mall West Philadelphia, PA 19106-1520

Phone: 215.592.1800 | Fax: 215.592.9125 | Web: www.dvrpc.org