

# A!ert

dvrpc | September 2015

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



## Air Quality Regulations

### U.S. EPA Finalizes the Clean Power Plan to Address Climate Change and Improve Air Quality

On August 3, 2015 the U.S. Environmental Protection Agency (EPA) announced the final *Clean Power Plan* rule. The *Clean Power Plan* is the first EPA rule to cut carbon pollution from existing power plants. Power plants are the single largest source of carbon pollution in the United States and account for approximately one-third of greenhouse gas emissions (GHG) in the nation. While regulations limit emissions of arsenic, mercury, sulfur dioxide, nitrogen oxides, and particle pollution from power plants, there are no limits on carbon emission levels.

According to the EPA, implementation of the *Clean Power Plan* will:

- Cut carbon emissions from the power sector nationwide by 32 percent below 2005 levels;
- Cut particle pollution, nitrogen oxides, and sulfur dioxide by more than 25 percent as a co-benefit; and
- Shrink electricity bills by approximately 7 percent by increasing energy efficiency and reducing energy demand.

The *Clean Power Plan* will be implemented through a federal-state partnership. The EPA has set target GHG reduction levels for each state but will allow states to develop strategies for meeting those targets through limits on smokestack emissions, energy conservation programs, alternative energy sources, or a mix of various strategies.

The EPA received more than 4.3 million comments on the plan between June 2, and December 1, 2014. As a result of these comments, the EPA has extended the deadline for mandatory carbon emissions reductions from 2020 until 2022 and allowed for less rigid, stepped reductions in carbon emissions between 2022 and 2029. The Final Rule also allows for flexibility through which affected power plants may meet their emission standards by allowing for trading of emissions rate credits (lbs. of carbon dioxide (CO<sub>2</sub>) per megawatt hour) or trading for credits of mass of carbon emitted (total short tons of CO<sub>2</sub>).

The Final Rule gives states until June 2016 to submit a state plan to the EPA outlining how the state will meet their reduction goals. States can request a two-year extension if they are unable to meet the June 2016 submission deadline. The EPA has also provided a model rule for states to use as a guide to develop their plans. The Final Rule includes a federal carbon emissions reduction plan which will be imposed on states that fail to submit state plans to implement the *Clean Power Plan*.



## Save the Date

**Monday,  
September 21, 2015**

**Philadelphia Diesel  
Difference Working Group  
10:00 am**

*Location of Meeting:  
DVRPC Conference Center  
8<sup>th</sup> Floor  
6<sup>th</sup> and Race Streets  
Philadelphia, PA*

**Saturday,  
October 10, 2015**

**Fourth Annual LaSalle  
University Community  
Health Fair**

**12:00 – 3:00 pm**  
*Location of Event:  
Shops at LaSalle  
1900 W. Olney Avenue  
Philadelphia, PA*

Under the *Clean Power Plan*, Pennsylvania will be required to reduce carbon emissions, from 2012 levels, by 587 pounds of CO<sub>2</sub> produced per megawatt hour of electricity generated or 26,835,324 tons of CO<sub>2</sub> emitted. New Jersey will be required to reduce carbon emissions by 279 lbs. per megawatt hour from 2012 levels or 4,655,306 tons of CO<sub>2</sub> from projected 2020 levels.

The rule is being resisted by the coal industry and coal producing states, with fifteen states joining industry plaintiffs to block the rule in federal court and a number of state governors refusing to develop state plans to satisfy the rule's requirements.

For more information on the EPA's *Clean Power Plan* please visit:

<http://www2.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants>



## Air Quality Information

### Study Shows July 4th Celebrations are Linked to Short-term Spikes in Particle Pollution

A new study authored by scientists at the National Oceanic and Atmospheric Administration (NOAA) is the first nationwide quantitative analysis of the impacts of July 4<sup>th</sup> fireworks celebrations on local air quality conditions. The study, published in the journal *Atmospheric Environment* in June, 2015, documented readings of fine particulate matter (PM<sub>2.5</sub>) from 315 monitoring stations from across the United States that had data from 1999 to 2013.

The new research shows that hourly concentrations of fine particulate matter typically reach their highest levels, when compared to the days before and after July 4<sup>th</sup>, on the evening of July 4<sup>th</sup>. Levels drop back down by noon on July 5<sup>th</sup>, according to the research. On average, the increases are largest from 9-10 p.m. on the holiday. Average concentrations over the 24-hour period starting at 8 p.m. on July 4 are 42 percent greater than on the days preceding and following the holiday. Weather conditions and wind conditions demonstrated significant impact on the readings.

While the researchers admit that the results of the study were not unexpected, they explained the importance of the study for air quality modelling and predictions, as well as for providing health advisories for people with breathing disorders who may be particularly susceptible to the impacts of PM<sub>2.5</sub> pollution, including asthmatics, the elderly, children, and people with heart and lung disorders.

Currently air quality models do not account for fireworks as a source of air pollution. The Environmental Protection Agency's rules accommodate the tradition of using fireworks on the Fourth of July and at other cultural events, by allowing states to demonstrate that the short-term PM<sub>2.5</sub> spikes measured on July 4<sup>th</sup> and 5<sup>th</sup> were influenced by fireworks displays and should not be used in determining whether an area has violated the agency's 24-hour PM<sub>2.5</sub> standards.

The study also showed that increases in PM<sub>2.5</sub> levels varied due to the proximity of the fireworks display to the air quality monitors. Those monitors located nearer the display showed the highest spikes in PM<sub>2.5</sub> concentrations, sometimes as much as 37 times higher than normal concentrations. This particular finding led the researchers to recommend that people who are sensitive to particle pollution should view the displays from as far away as practical, watch upwind of the display if possible, and to be sure to have rescue medications available.

For more information on the NOAA research on the impact of fireworks displays on PM<sub>2.5</sub> spikes, please visit:

<http://www.sciencedirect.com/science/article/pii/S1352231015301369>



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