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Alert

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

Air Quality Regulations

Thirteen Mid-Atlantic and New England Jurisdictions Propose Program to Cap Carbon Emissions from Transportation

On Tuesday, December 17, 2019, the Transportation and Climate Initiative (TCI) released a draft Memorandum of Understanding that would create a cap and trade program for carbon emissions from transportation sources in twelve Mid-Atlantic and New England states, as well as the District of Columbia.

The TCI is a regional collaboration of twelve states and the District of Columbia, representing over 20% of the nation's population. The TCI seeks to improve transportation, develop the clean energy economy and reduce carbon emissions from the transportation sector. The participating states are: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia.

The proposed program would require that companies that supply gasoline and diesel fuel purchase allowances for each ton of carbon pollution that would be emitted by the burning of those fuels. The allowances would be sold by the TCI states or be available for purchase on secondary markets, and the proceeds would go back to the states in order to fund transportation infrastructure or environmental improvements.

According to the US Energy Information Administration, the transportation sector accounts for over 40% of greenhouse gas emissions in the TCI region and the proposal is expected to lower regional carbon emissions from on-road cars and trucks by 25% between 2022 and 2032. Associated harmful tailpipe emissions, like nitrogen oxides and fine particle pollution would also be reduced through a decrease in fossil fuel use. The TCI valued the associated health benefits of this proposal at $10 billion per year and claim the initiative will prevent 1,000 premature deaths annually that are attributable to air pollution. The TCI projects that the auctions of pollution credits will provide the states with up to $7 billion per year, which they advocate be spent on modernizing the region's transportation infrastructure, public transit, and improving access to transportation for poor and underserved communities.

Opponents of the proposal claim that fuel companies will simply pass the costs of pollution credits onto consumer including the trucking industry. Opponents also claim that those costs will be disproportionately born by poor and rural populations that will have little access to transit or infrastructure for alternative fueled vehicles that are funded by this plan.

Save the Date

Wednesday
February 26, 2020
Application Deadline for US EPA Diesel Emissions Reduction Act grant

For information on the grant program, please visit: https://www.epa.gov/cleandiesel/clean-diesel-national-grants

Friday
February 28, 2020
Comment Deadline for TCI Draft *Low Carbon Transportation Proposal*

Please submit comments at: www.transportationandclimate.org

The TCI will be accepting public comment on the Draft Low Carbon Transportation Proposal until February 28, 2020. The full proposal is available at www.transportationandclimate.org. Comments will also be accepted on that webpage.

Air Quality News

Boston University Publishes Detailed Map of Automobile Emissions from the Nation's Roads

In October 2019, researchers from Boston University published a database that they used to create detailed maps of emissions from on-road transportation sources across the United States. The researchers used federal traffic data to calculate the number of miles traveled on local segments of each road on the national highway system and converted those miles to carbon dioxide emissions by estimating how much fuel was consumed by different types of vehicles using those roads.

The original Boston University study was published in the journal *Proceedings of the National Academy of Sciences* in 2015. The updated publication of the database includes an additional five years of data which the researchers have use to identify trends in carbon emissions from transportation sources.

Approximately 30% of national greenhouse gas emissions come from transportation. The findings of the study indicate that emissions from passenger cars, trucks, and sport utility vehicles account for over 60% of that total and delivery trucks account for an additional 23% of national carbon emissions from transportation.

In 2017, carbon emissions from transportation sources exceeded carbon emissions from electricity generation sources for the first time. The researchers attribute this trend to the retiring of coal fired power plants that are being replaced with natural gas and renewable energy powered generators. The trend is reinforced by Americans' preference for larger vehicles and an uptick in vehicle miles traveled (VMT).

The researchers warn that carbon emissions from transportation sources are likely to continue to trend upward as President Trump rolls back regulations enacted by the Bush and Obama administrations that were designed to reduce automobile emissions.

While this data reflects an increase in carbon emissions, the authors recognize that criteria pollutants, such as nitrogen oxides which contribute to both fine particle and ozone pollution, are also likely to increase as fossil fuel use increases as a result of increases in VMT.

The New York Times utilized data from this study to create interactive maps of the nation's 100 biggest metropolitan regions in order to compare emissions from those areas. The map allows users to compare their region to other regions as well as hotspots within regions. This mapping can assist planners in identifying appropriate strategies for reducing emissions, noting that strategies that work in New York City may not be appropriate for places like Dallas, Texas.

"Meaningfully lowering emissions from driving requires both technological and behavioral change", said Deb Niemeier, a professor of civil and environmental engineering at the University of Maryland. "Fundamentally, you need to make vehicles pollute less, make people drive less, or both."

"No matter the mechanism", Dr. Conor Gately leader of the Boston University study said, "big, long-term change needs to happen in America's cities." Visual tools made possible by studies like this one help convey the need for action to meet air quality goals.

The full dataset of on-road carbon emissions, titled "DARTE Annual On-road CO_2 Emissions on a 1-km Grid, Conterminous USA, V2, 1980-2017" can be downloaded from the NASA website at https://daac.ornl.gov/cgi-bin/dsviewer.pl?ds_id=1735.

The New York Times online map of auto emissions was published on October 10, 2019 in an article titled "The Most Detailed Map of Auto Emissions in America". This interactive map can be accessed at: https://www.nytimes.com/interactive/2019/10/10/climate/driving-emissions-map.html?action=click&module=RelatedLinks&pgtype=Article

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

DVRPC, 8th Floor
190 N. Independence Mall West
Philadelphia, PA 19106-1520
Phone: 215.592.1800 | Fax: 215.592.9125 | Web: www.dvrpc.org

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