D.C. Area Outpaces Nations in Pollution

High Carbon Emission Blamed On Coal Plants

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The Washington area produces more carbon dioxide than several medium-size European countries, according to a new estimate of local emissions, as the region's crawling traffic and coal-fired power plants give it a pollution "footprint" out of proportion to its size.

The estimate, by the Metropolitan Washington Council of Governments, seems to be the first official attempt to put a number on the region's contributions to climate change. And the number is big: 65.6 million metric tons of carbon dioxide were emitted here in 2005. That was more than in all of Hungary, Finland, Sweden, Denmark or Switzerland, each of which has more people.

Within the region, the estimate shows that the Maryland suburbs -- often stereotyped as green-leaning and blue-voting -- produce more carbon dioxide than either the Virginia suburbs or the District. One major reason: It is home to three coal-burning power plants.

The region is in a period of changing light bulbs and policies as residents and governments rush to rein in the pollution blamed for climate change. The estimate shows how big the task really is. The region is polluting on a globally significant scale, it shows, and getting steadily worse.

"It's not a surprise that we compete with entire countries in Scandinavia," said Mike Tidwell, who heads the Chesapeake Climate Action Network, an environmental group. "What this data does is point up just how huge America's contribution to climate change is . . . if our one capital region is emitting on par with other industrialized countries."

Generally, most anything with a smokestack or tailpipe -- anything burning some fossil fuel for energy -- emits carbon dioxide, which accounts for about 84 percent of all U.S. greenhouse-gas pollution. To calculate how much carbon dioxide the area emits, a sum called a carbon footprint, COG staff workers added up emissions from power plants, cars, airplane engines, home heaters and other sources.

Such pollution inventories have been done for states and some U.S. cities in recent years, but this effort seems to be one of the first to look at an entire metropolitan area.

One point of comparison was a study of the San Francisco Bay area. It produces more carbon dioxide than greater Washington, 69.7 million metric tons a year. But it also has more people, 6.8 million, so Washington produces more on a per capita basis.

Calculations were rough: For some emission sources, detailed local data were not available, so COG staff workers extrapolated numbers from state-level figures. They also did not include other pollutants, such as methane, that play a role in climate change.

"It's not a full-blown inventory" of carbon emissions, said Jeffrey King of COG. "It's estimates. We're trying to estimate greenhouse emissions for the region based on available data."

But, rudimentary as it is, the estimate makes one fact obvious: The Washington region may be only a pixel on the world map, but it is a significant player in its pollution.

"We're kind of like a country -- you know, a small country," said Judi Greenwald, director of innovative solutions at the Pew Center on Global Climate Change, a nonprofit group. She saw that as a bad thing and a good thing, in that if Washington cleaned up, the world would notice. "We can take action that is globally significant," Greenwald said.

For example, greater Washington's carbon dioxide emissions are 25 percent higher than those of Sweden, which has 9 million people, compared with the Washington region's 5 million. Emissions are 42 percent higher than in Switzerland, a country of 7.5 million.

The reason that greater Washington pollutes a great deal, scientists say, is that Americans in general pollute a great deal. In fact, the region's residents -- who can take mass transit and live in pedestrian-friendly urban centers -- produce less carbon dioxide per capita than the average American. At last count, the total was 13.2 metric tons a year, compared with close to 20 metric tons a year per person nationally.

But the region still has many of the country's bad carbon habits. Washington's cars and trucks, which sit in traffic recently judged to be tied for second-worst in the country, account for 34 percent of area emissions. In total, transportation in the region accounts for 22.6 million metric tons of carbon dioxide, the equivalent of all of Lithuania's emissions and roughly five times what Nicaragua emits.

Also, the area is home to several coal-burning power plants, the type of plant that supplies nearly half the country's electricity. Together, power plants in the region produced about 20 million metric tons of carbon dioxide in 2005, or two times the output of Armenia.

"We rely heavily on coal," said Montgomery County Council member George L. Leventhal (D-At Large), who has been active on environmental issues. "And coal is dirty."

The impact of coal seems especially evident in the figures for Maryland, which has emissions almost equal to those of the District and Northern Virginia combined.

The main reason, according to King -- who worked on the data -- is the amount emitted from such coal-fired plants as Dickerson in Montgomery, Chalk Point in Prince George's

and Morgantown in Charles counties. Virginia also has several coal-fired plants, environmentalists said, but they are located mainly in other parts of the state.

Cleaning up the emissions from these coal-fired plants is, for now, a tall order because technology to capture and store carbon dioxide is not in wide use. For the moment, climate activists would like to see states reduce their overall energy use so that less coal needs to be burned. Eventually, they hope that cleaner energy sources will be found.

Governments at various levels are beginning their own cleanups. Arlington, Fairfax and Montgomery counties have joined a "cool counties" program that calls for such changes as more "green" buildings and more hybrid cars in county fleets. The District has mandated energy-saving features in some new buildings.

A new Maryland law will cut auto emissions, and the state has joined a regional pact to reduce emissions from power plants. Virginia recently announced an energy plan that includes a goal to cut emissions by 30 percent by 2025.

Ordinary citizens also seem to be looking for ways to help. A campaign called the Cool Capital Challenge, which asks individuals and companies to promise to reduce their own emissions, has received pledges this year totaling 265 million pounds of carbon dioxide.

In Woodley Park, environmental blogger Joseph Romm made his own changes, remodeling his home to include energy-saving appliances and an energy-generating solar array on the roof. He works from home most days and drives a hybrid Toyota Prius when he does leave.

"If you have come to the view that global warming is the biggest problem facing this country," said Romm, who writes about climate change, "then I think you have to do something."

But how much can really be done? Although local officials are promising to reduce carbon dioxide emissions in the coming decades, the COG report shows that pollution is actually going the other way: up. At the current pace, it forecasts, emissions will increase 35 percent by 2030.

That's left a few local officials thinking that the region may need some solution to appear -- a new technology, perhaps, that would make it possible to pollute less, even as the area grows.

"We don't know how we're going to meet the very, very . . . intense goal" of sharp reductions in the coming decades, said Stuart Freudberg, director of environmental programs for COG. "It's not going to be something we figure out -- you know, six months from now, we have the answer."

Staff researcher Eddy Palanzo contributed to this report.