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Searching for Balance

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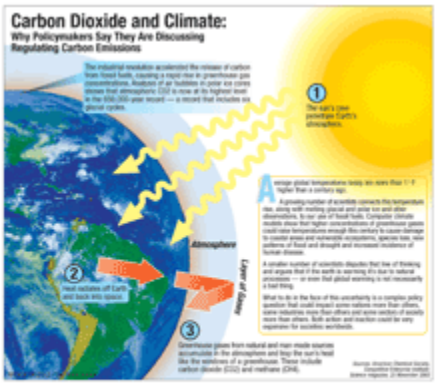

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THE CARBON QUESTION
A QUANDARY FOR WEST VIRGINIA

Carbon dioxide: Everyday gas is focal point in debate.

Story by Beth Gorczyca-Ryan Email | Bio

This is the first week of a three-week series examining how the global warming debate might impact West Virginia.

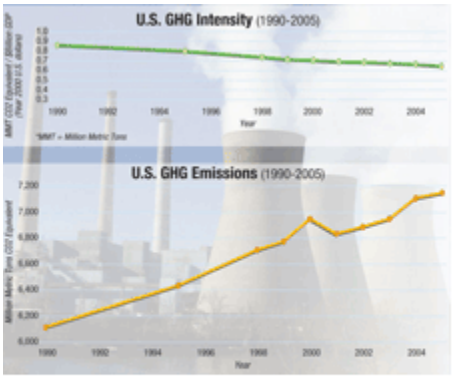
The world suddenly has a new villain.

It's not someone from an Axis-of-Evil nation. It's not someone trying to buy yellow cake to build a dirty bomb.

Instead the villain is something called carbon dioxide -- a natural compound we breathe out and trees breathe in every day.

The problem, at least according to a new report from the United Nations Intergovernmental Panel on Climate Change, is we have been belching out too much of the stuff. Activities such as burning coal for power, using petroleum in our cars and cranking up the natural gas heat on cold winter nights have emitted so much carbon dioxide over the years that we're altering the Earth's climate instead of creating a perfect balance, the report says.

Not everyone agrees that global warming exists, or if it does exist that it is harming the Earth. Many scientists say our current technology is far too limited to determine whether carbon dioxide has negatively impacted the world. They say recent temperature fluctuations could be linked to solar activities or even be part of the planet's natural trend.



Learn More: Click here to see the full-sized diagram showing how regulation might work

But even the biggest proponents and opponents of climate change are at a point that they can agree on one thing: Chances are good that the U.N. report, as well as other reports that have come out in the past, will encourage Congress to try to pass laws that regulate carbon emissions.

And that could mean big changes to the Mountain State.

"West Virginia has so much to lose if it doesn't pay attention to this," said Sen. Jay Rockefeller, D-W.Va, who has been vocal in his belief that global warming is real and directly related to human behavior. "If you get a lump in your thyroid, you can ignore it. Sometimes it's benign. Sometimes it isn't.

"There are hundreds of scientific reports saying (global warming) is real. So there are two things we need to do. The first thing is don't panic. The second thing is you have to be responsible ... you have to take it seriously."

Predicting the Policy

So what kind of impact could restricting carbon emissions have on West Virginia? That's the million-dollar question right now that no one in the state really wants to ask ... or answer.

Economists at West Virginia University and Marshall University are not really looking at the possible economic impact of carbon regulations on the state's economy right now. Much of that may be because no one is really sure what kind of carbon regulations Congress will push.

It's hard to study something that doesn't exist yet.

Another reason is that economists and scientists aren't sure there is enough consensus in Congress for it to approve greenhouse gas regulations.

"I think it will be a while because people aren't in agreement on how seriously to take global warming. There are a lot of doomsdayers out there, but there isn't a lot of strong agreement," said Marshall economist Christine Risch.

But folks on Capitol Hill see things differently.

U.S. Rep Nick Rahall, D-W.Va., said the tide is changing so much in Washington, D.C., right now that the question should not be whether lawmakers will pass a carbon law but rather when.

"We've seen all of the studies, and they seem to be based in sound groundwork," Rahall said. "They all seem to verify that (global warming) is a problem."

Even companies that make their money extracting fossil fuels have embraced the issue of global warming as a problem that needs to be talked about and addressed.

"Our company believes that what we do has an effect on the global climate," said Ryan Lance, a vice president with ConocoPhillips, the largest gasoline producer in the United States.

Not long ago, most energy companies strongly denied any change in global climate and disavowed a link between that and their companies. Now that's changing. Why? Maybe they have read enough scientific reports to believe it's true. Maybe their shareholders demanded a change. Or maybe they are talking about global warming because they see changes coming, and they want to be at the table discussing options instead of being served as a main course.

"Good policies require us to all talk together. Bad policy is made in a vacuum," Lance said.

Caps and Trades

What people at the local and national level are looking at is how carbon regulations might be structured.

One possible way is a cap-and-trade system. Under that method, the federal government sets a mandatory level of maximum carbon emissions. That level then is divided among emitters that buy rights for each metric ton of emissions produced. If a company doesn't use all of its rights, it could sell them to another company that was at risk of exceeding its rights.

Those rights could be worth tens of billions of dollars depending on how the program is set up.

Cap-and-trade programs already work to control other air pollutants, specifically sulfur dioxide and nitrogen oxide. But will they work for carbon dioxide? Washington leaders believe so. In the past several years, members of Congress have introduced numerous carbon dioxide bills that would regulate the emissions through some sort of cap-and-trade system.

Charles Bayless, president of West Virginia University Institute of Technology and a former power company president, said he believes that system will eventually become a reality.

"But it's a very divisive issue, though, across party lines," he said. "You've got people who are from coal-producing states and others from non-coal producing states. But I think, in the end, something is going to have to happen like that."

Some states already have embraced cap-and-trades programs. In 2006, seven northeastern states formed the Regional Greenhouse Gas Initiative to try to reduce the amount of carbon dioxide. That same year, California passed a different type of cap-and-

trade plan to cut back on that state's greenhouse gas emissions.

The two plans are distinctly different. And at least in the eyes of energy officials, that makes things exceedingly difficult. Tim Mallan, environmental affairs manager for Appalachian Power, said his company prefers a market-based program, such as in the cap-and-trade scenario -- "something that indeed sets goals but then leaves it up to the industries or the sources of greenhouse gases to determine the best, most economical and, in many cases, the most socially acceptable ways to control emissions."

But Mallan said the only real way to make carbon regulations work is to approve a nationwide cap-and-trade system instead of the state-by-state smorgasbord that is starting to emerge.

"Having one state having one set of regulations (and then) having another state having another set of regulations is extremely difficult to do business," he said.

Carbon Tax

Another possible way to reduce greenhouse gas emissions could be by levying a tax against people who use fossil fuels.

At its most basic level, the tax would be paid by anyone who emits any carbon dioxide.

Last November, voters in Boulder, Colo., approved what may be the nation's first carbon tax. Under the tax, which is supposed to go into effect in April, anyone who uses electricity generated by the burning of fossil fuels will be assessed extra fees based upon the kilowatt hours used.

The money raised from the tax then will go into a fund that will help to increase energy efficiency in homes and buildings, encourage more people to use renewable resources and reduce their use of vehicles.

Some scientists say a carbon tax is the best solution to curb global warming because it evenly spreads the pain of curbing our fossil fuel addiction. And that pain would offer the proper incentive to engineers, inventors, companies and Wall Street to commit to developing alternative energy sources.

"A carbon tax would provide the maximum incentive for bright engineers to improve the efficiency of fossil fuel use in all sectors of society," William Schlesinger, dean of the Nicholas School of the Environment and Earth Sciences at Duke University, wrote in 2005.

The United State's Congressional Budget Office has studied both the cap-and-trade system and carbon taxes. Their 2005 report said taxes actually are more efficient because they have a very specific price affixed to them. The office said if a company underestimates the amount of carbon dioxide it emits, the cost of buying additional permits could become exceedingly expensive. With the tax, carbon emitters pay more up front without the risk of a huge, unexpected expense later.

But Rockefeller said he doubts a carbon tax ever will become national law -- at least not right now.

"Anything we pass still has to get signed by the president, and he won't sign that," said Rockefeller, who added that he also opposes a tax. "It would not pass, so it would be an exercise in futility to introduce or debate it."

Bill Raney of the West Virginia Coal Association said a tax on greenhouse gas emissions would be awful not only for the coal industry but also for the entire economy.

Why? He said everything is somehow related to carbon. Not only are carbon-thick fossil fuels burned to produce energy to make things and then transport those things to stores, but fossil fuels also are used as a base in many products, including medicines, paint pigments and even sugar substitutes.

"A carbon tax is simply something that is going to impact every person on a fixed income because it's going to roll back through the products," he said, adding later: "A carbon tax is just a simple solution that I think makes everyone feel good wherever the capital is, whether it's in D.C. or whether it's in Charleston or Pierre, S.D."

Instead, he said, the coal industry is hoping for a cap-and-trade system that is completely market driven.

"I think with a cap-and-trade (system), you've got a dynamic format, if you will, where you begin to bring different dimensions in and you can roll in different components that you're either trading different components or you're capping different ways, and you learn to control better so you build up credits," he said.

Natural Sequestration

Those different components include natural ways that carbon can be trapped instead of sent into the atmosphere.

One way is to pump carbon dioxide thousands of feet underground where it is trapped. Called carbon sequestration, the practice has been used by oil companies for decades to push oil out of the ground.

But it's a relatively new concept for just disposing of carbon dioxide. Recently, American Electric Power, the parent company of Appalachian Power, the U.S. Department of Energy and the Benedum Foundation tested carbon sequestration near the Mountaineer Power Plant in Mason County. The group dug a hole 9,800-feet deep and then pumped down carbon dioxide emissions into a saline aquifer.

So far the test has been successful, Mallan said. But the endeavor is extremely expensive.

"It was $4 million just to dig the hole," he said.

Now the DOE is conducting an extensive mapping project to see where other saline

aquifers and geological formations exist for more sequestration sites.

Raney and Rahall said that project opens up opportunities for West Virginia. Raney said the Mountain State already has natural gas storage fields all over it. Those could be used to store carbon dioxide.

And if that happens, Raney said, the state should get credit under a cap-and-trade system for taking all of that carbon dioxide.

Another way to reduce greenhouse gas emissions is planting trees.

Trees and plants absorb carbon dioxide through photosynthesis. So if the world wants to lower its carbon dioxide emissions, it needs to not just hug a tree but plant one.

Thanks to our huge stock of trees, West Virginia is considered a carbon sink, which means it absorbs more carbon dioxide than it emits.

Raney said that's another thing that carbon regulations should take into consideration.

"You know it doesn't make too much sense to me that you force a utility here in West Virginia to go buy a piece of rainforest in South America in order to mitigate what someone thinks might be a violation of some kind of standard when we have got perfectly healthy, maturing hardwood forests right here," he said.

Environmentalists say planting more trees is a must. But they said it's hard to accept coal industry officials talking about the need to plant trees when they destroy thousands of acres of perfectly good hardwood forests through mountaintop mining.

"When you take away the trees, that adds to the global warming," said Chuck Nelson, a member of the Ohio Valley Environmental Coalition. "Mountaintop removal mining destroys forests, and it destroys communities."

And those forests don't grow back soon. OVEC's Vivian Stockman said the nation and state need to study how much value woodlands, marshes, bogs, rivers, streams and oceans have in terms of contributing back to society. Once people realize how valuable, for example, trees are in absorbing carbon dioxide, they will be less likely to sit by while a whole forest is knocked down.

"What we'd learn really quickly is that our cheap electricity is not so cheap," she said.