

Towering experiment

By R. SCOTT RAPPOLD

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ERIE - The haze was thick in this town north of Denver on Tuesday, obscuring the Rockies like a pale curtain while the temperatures hovered in the low 90s.

It was a perfect day for the unveiling of a project to track carbon emissions from cars and other fossil fuel burning sources on the Front Range. Researchers hope it will provide the first comprehensive look at the local greenhouse gases that contribute to global warming.

And it will be done from 1,000 feet in the air, atop a research tower higher than Denver's tallest building.

"From a climate change perspective, I think it's a serious emergency, globally, and we've got to really work at it," said Pieter Tans, a senior scientist at the National Oceanic and Atmospheric Administration in Boulder, which operates the research station.

The tower has been used for climate research since 1977. When it was built, said site manager Dan Wolfe, a couple of local reporters came to the ribbon-cutting.

Times have changed, and global warming has become the most pressing environmental issue of the day. More than two dozen reporters stood in the heat Tuesday, in a dusty yard with little shade — save that of the tower — to hear about this highly technical experiment.

"I'm just flabbergasted at the response," Wolfe said.

Local, state and federal governments have long monitored air quality for threats to health such as smog and particulate matter, which are related to emissions from cars, power plants and factories.

But tracking carbon dioxide and carbon monoxide in the atmosphere by city and region has been left to computer models, using weather patterns and other factors, such as the number of cars on the road and coal burning plants in the area.

Air samples will be taken every 15 minutes from different levels of the tower, and then automatically analyzed to determine carbon dioxide and carbon monoxide concentrations.

"The more observation sites we have, the less we have to rely on assumptions," Tans said.

As cities and states set goals for emissions reductions, the site could help show how successful they are, Tans said.

There are limitations, however. It's dependent on the wind, meaning to track carbon in Denver, the wind must be coming out of the south. And it will probably offer little data specific to Colorado Springs, since the Denver metro area lies between the Pikes Peak region and the tower.

Still, researchers say it will eventually be part of a national network of a dozen towers, capable of measuring greenhouse gases in every region of the country.

It remains to be seen how the research will affect the debate over global warming and the impact of humans on it — but there's no doubt in the minds of the scientists running it.

Said Tans, "We humans have the capability to fundamentally change the climate in a big way."

CONTACT THE WRITER: 476-1605 or scott.rappold@gazette.com