

## Study Says Fossil Fuels Not Major Cause Of Rise In Methane

As President Obama announced new air emission regulations on the oil and gas industry on March 14, a new study was released by a group of international scientists three days earlier (March 11) that rules out fossil fuel production as the major cause in the rise of methane levels in the atmosphere.

The research, led by National Institute of Water and Atmospheric Research (NIWA) atmospheric scientist Hinrich Schaefer, has “concluded that increasing levels of methane in the atmosphere since 2007 are most likely due to agricultural practices, and not fossil fuel production as previously thought.”

NIWA scientists first noticed trends occurring in the data collected at NIWA’s clean air monitoring stations at Baring Head in Wellington and Arrival Heights in Antarctica and later began to collaborate with the University of Colorado in the U.S., and Heidelberg University in Germany whose scientists were taking similar measurements in a number of locations across the world.

Between 1999 and 2006 scientists observed a plateau in the amount of methane in the atmosphere. The amount had been steadily increasing since pre-industrial times but then leveled off for about seven years. After 2006 it began to rise again and continues to do so.

“We found we could distinguish three different types of methane emissions. One is the burning of organic material, such as forest fires. Another is fossil fuel production – the same processes that form natural oil and gas - and the third is formed by microbes which come from a variety of sources such as wetlands, rice paddies and livestock.”

Analysis since 2006 rules out fossil fuel production as the source of methane increasing again, according to the study.

“That was a real surprise, because at that time the U.S. started fracking and we also know that the economy in Asia picked up again, and coal mining increased. However, that is not reflected in the atmosphere,” Schaefer said. “Our data indicate that the source of the increase was methane produced by bacteria, of which the most likely sources are natural, such as wetlands or agricultural, for example from rice paddies or livestock,” he said.

Previously published studies had determined that the methane originated from an area that includes South East Asia, China and India – regions that are dominated by rice production and agriculture.

“From that analysis we think the most likely source is agriculture,” he said. “If we want to mitigate climate change, methane is an important gas to deal with. If we want to reduce methane levels, this research shows us that the big process we have to look at is agriculture.”

Naturally produced methane sources are particularly sensitive to changes in climate and Dr. Schaefer says wetlands produce more methane if there is more rain and if it is warmer. Thawing permafrost produces methane and methane is also found in ice-like structures in ocean sediments. President Obama’s new regulations will cover all oil and gas operations from coast-to-coast. The Environment Protection Agency will be implementing regulations soon. Industry will then know what will be required.

The new methane regulations are just another example of this administration’s disdain for the oil and gas industry.