Methane Leaking

Leaks start before the gas even gets out of the well because of the nature of the well itself. Cornell professor and fracking expert Anthony R. Ingraffea explains the leaks this way: “Pressures under the earth, temperature changes, ground movement from the drilling of nearby wells and shrinkage crack and damage the thin layer of brittle cement that is supposed to seal the wells.” He goes on to say that new regulations do not apply to older wells, and that even with new wells, “multiple industry studies show that about 5 percent of all oil and gas wells leak immediately because of integrity issues, with increasing rates of leakage over time. With hundreds of thousands of new wells expected, this problem is neither negligible nor preventable with current technology.”

The 2010 Documentary Gasland was a major expose of the destructive nature of fracking. In it we saw the now-famous image of a person lighting a fire from the water that poured out of his kitchen tap. This is evidence that methane has leaked into the water table that feeds local people’s wells during fracking. Methane is the major component of natural gas and is a greenhouse gas much more damaging than carbon dioxide. The ubiquitousness of leakage is why natural gas is no longer considered a good option to coal.

Any fossil fuel causes carbon dioxide emissions when burned, and that includes natural gas. At the point of use, natural gas does emit less carbon dioxide than other fossil fuels do. But the frequency of leaks makes methane a fuel source no better than coal, and maybe worse. Methane leaks occur during extraction, along the pipeline route, and at compression stations. Many people refer to the benefit of relatively low emissions from burning natural gas, but unless we are including “fugitive leaks” in the whole life cycle of natural gas, we are not looking at useful data. The advantages of gas over coal for home heating “are slim to none,” and “the substitution of natural gas as a transportation fuel actually carries a 10% - 35% risk of increasing emissions.”


9 Oreskes, Naomi, “Wishful Thinking about Natural Gas: Why Fossil Fuels Can’t Solve the Problems Created by Fossil Fuels.” Published on tomdispatch.cm on July 28, 2014