Fracking as producing lower emissions than coal???

The science concludes otherwise (Howarth et al, 2011, 2012. Also see Peischl et al., 2013 on 17% methane leakage rate from O&G production, *Quantifying sources of methane using light alkanes in the Los Angeles basin, California*, JOURNAL OF GEOPHYSICAL RESEARCH: ATMOSPHERES, VOL. 118, 4974–4990, doi:10.1002/jgrd.50413, 2013).

The social license to operate should be based on the science, which is completely on the side of those opposing fracking and certainly is not going to change within the time frame necessary to prevent catastrophe from increasing ghg emissions resulting from increasing fracking, no matter what tinkering occurs with state regulations. Colorado's are certainly not adequate to protect climate.

Cornell professor, Anthony Ingraffea, responds to questions on [new study published in the journal, *Science*](http://www.sciencemag.org/content/343/6172/733.summary)*,* that reveals much larger methane emissions from oil and gas extraction than previously acknowledged. *Asked how this study can be reconciled with Dr. Ingraffea’s research on methane emissions from U.S. gas extraction and distribution, Dr. Ingraffea responded,*

“Its findings are largely consistent with what was published by Howarth et al. in 2011: oil/gas industry and the EPA have been underestimating national -scale methane emissions, by a large margin.”

*Regarding the study’s conclusion that major methane leaks do not eclipse supposed benefits of switching from coal to natural gas for generating electricity, Dr. Ingraffea explained:*

*Regarding the journal Science study’s conclusion that major methane leaks do not eclipse supposed benefits of switching from coal to natural gas for generating electricity, Dr. Ingraffea explained:*
“I disagree. Once again, there is a stubborn use of the 100-year impact of methane on global warming, a factor about 30 times that of CO2. All the current consensus climate science, summarized in IPCC AR 5, says that we only have about 20-30 years before we reach the warning zone of temperature rise that could lead to climate tipping points. And we can’t wait 20-30 years to START decreasing CO2eq emissions from fossil fuels. Over a 20-year period, the consensus  impact factor for methane is about 80, and some peer-reviewed estimates say it could be over 100. There is NO scientific justification for the use of a 100-year period: that is a policy decision, perhaps based on faulty scientific understanding of the climate change situation in which we find ourselves, perhaps based on political wishful thinking. When one looks at the coal-methane tradeoff for electricity generation, the break-even leak rate over a 20-year period is less than 3%. And only about 1/3 of our methane usage is for electricity generation. Again, there is a stubborn refusal to admit that doing something non-fossil-foolish about the other two-thirds is even more important. This paper should have emphasized that the continued heating of our homes and businesses and our hot water with electricity generated from combusting methane cannot be scientifically justified from a climate change perspective.”

*Asked how the study contributes to an understanding of methane leakage and what can be done about it, Dr. Ingraffea stated:*
“It once again indicates that industry and the EPA have been underestimating, when we all should have been out there measuring, BEFORE setting energy policy. However, I disagree with the assertion that a significant dent can be made in methane emissions quickly and cheaply by an industry that refuses to accept that their estimates have been wrong. Ratepayers will have to pay to fix leaking infrastructure, IF the industry is forced to make the fixes, and, given the brief 20-year period we have left to DECREASE CO2eq emissions, such fixes will not be in time. They just make the ‘bridge’ too long in time.”

posted at [acfan.org/2014/anthony-ingraffea-responds-to-new-science-research-on-methane-leakage/](http://acfan.org/2014/anthony-ingraffea-responds-to-new-science-research-on-methane-leakage/)

“When one looks at the coal-methane tradeoff for electricity generation, the break-even leak rate over a 20-year period is less than 3%.” – Ingraffea

U.S. Energy Information Administration, *2013 Energy Outlook:* "Although more abundant and less expensive natural gas in the High Oil and Gas Resource cases does lead to less coal use and more natural gas use, it also reduces the use of renewable and nuclear fuels and increases energy consumption overall."

International Energy Agency Executive Director,
 Maria van der Hoeven: "Indeed, under a modeling scenario…in which global natural gas demand increases by 50% between 2011 and 2035, global energy‐related CO2 emissions follow a path that is consistent with a long‐term temperature rise of **over 3.5 degrees Celsius**…So while the foundation may have been laid for a “golden age of gas,” this would not be a golden age for climate.

Indeed, for countries with cheap, abundant gas supplies that are committed to fighting climate change, there will be a need for policies to defend truly low‐carbon energy sources from the economic pressures of gas."

–– [iea.org](http://iea.org/)/newsroomandevents/speeches/140220TechnologyMITspeech.pdf