

Testimony of Darren Smith, Environmental Manager, Devon Energy Corporation

Before the EPW Subcommittee on Clean Air and Nuclear Safety

Washington, D.C. June 19th, 2012.

Dear Mr. Chairman and members of the Subcommittee. Thank you for the opportunity to be here today.

My name is Darren Smith, and I am the Environmental Manager for Devon Energy.

Devon is a leading independent oil and natural gas company focused onshore in the United States and Canada. The company's portfolio of oil and gas properties provides stable, environmentally responsible production. We work hard to conduct operations in an environmentally responsible way, reducing impact on land, water and air. This is good for the environment and is good for business. It is important to note that Devon supports reasonable regulation of the industry; however, we oppose inappropriate regulations that are based on unsound science.

My testimony this morning will describe EPA's misperception of initial production from gas wells. I will describe how this misperception has led to a drastic overestimate of methane emissions from hydraulically fractured natural gas wells. This overestimate has allowed EPA to justify the promulgation of new air standards for the natural gas industry. More important, we continue to see new policy research being based on a foundation of this bad data - guaranteeing that the wrong conclusions are reached.

It was when researchers from Cornell University released their "natural gas is dirtier than coal study" that Devon first became aware that EPA had dramatically changed its emissions estimate for hydraulically fractured gas wells. EPA now asserts, and has reported to the United Nations Intergovernmental Panel on Climate Change, that each unconventional gas well emits over 9 million standard cubic feet of natural gas to the atmosphere and has done so since 1990.

Devon became suspicious of EPA's new estimate because if true, it would mean that Devon alone wastes over 40 million dollars of natural gas to the atmosphere annually. Clearly, a successful company like Devon could not tolerate this level of waste.

When we investigated the basis of the estimate change we learned that EPA staff had used industry data reported to it under the voluntary EPA Natural Gas Star Program to generate the new factor. The data used came from only 3 companies.

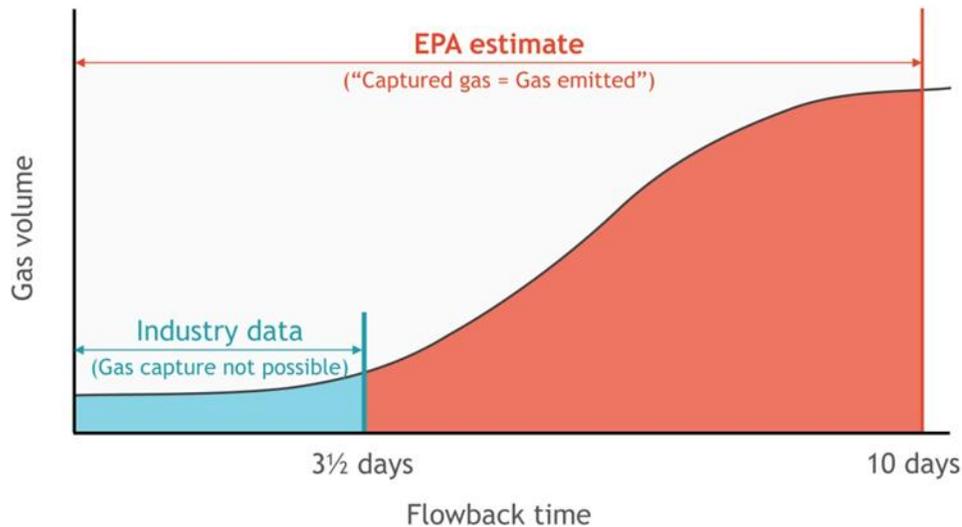
This finding represents the most significant flaw in EPA's method. Simply put, the Natural Gas Star Data represents gas captured, not gas emitted. Moreover, the data reported into the Natural Gas Star program was never intended to represent emissions.

Devon has informed EPA of this error numerous times. We have brought actual data from Devon's operation and met face to face, we have supplied comments and data from a broader set of Oil and Gas Operators to the oil and gas rule docket, we have followed up by email and telephone, and we have supplied a report from IHS CERA confirming our findings. The US Chamber of Commerce has petitioned for a correction under the Data Quality Act.

Despite all of this, EPA has failed to acknowledge its mistake much less correct it.

I would now like to turn to the graphic contained in your copy of my testimony. It will help illustrate EPA's misconception and how it has resulted in a dramatic overestimate of emissions from our industry.

Well Emissions: Actual vs. Perceived by EPA



EPA's fundamental misperception of initial gas production from natural gas wells leads to dramatic overestimates of methane emissions.

First I want to draw your attention to the curve. After a well is hydraulically fractured, it undergoes what is called flowback. In simple terms, Flowback is necessary to remove water from the well so it can produce gas.

The left side of the curve represents the beginning of flowback where water production is highest and gas production is lowest. Progressing right - as water is removed from the well, gas production increases until at the far right side, gas production reaches its maximum rate and levels off.

Now, EPA believes that the period of flowback is up to 10 days because that is what has been reported to the Natural Gas Star program. In Natural Gas Star, Operators report the volume of gas that they capture while operating specialized capture equipment. Since gas is being captured and not wasted it is not uncommon to operate this capture equipment for 10 days or more. Remember Natural Gas Star is for gas captured not gas emitted.

10 days of gas capture is on the far right side of the curve and equates to 9 million cubic feet according to how EPA averaged the Natural Gas Star data.

This contrasts significantly with the scenario where gas cannot be captured from the flowback stream - the blue shaded area.

Actual data from 8 operators has demonstrated that flowback lasts on average only 3.5 days when gas capture is not possible. An operator will flow the well back only as long as needed to remove the bulk of the water - when steady gas flow is established, the well is shut off until the pipeline is laid.

Clearly, captured gas volumes reported to Natural Gas Star, from 10 day flowback periods, are significantly higher than gas volumes released from flowback over 3 and a half days.

EPA has erred by assuming that the volume of gas captured under the Natural Gas Star program is the same volume of gas that would be emitted when gas capture is not possible.

To conclude, the error must be corrected now. We have already seen its misuse to justify air quality rules for fracking. It will continue to fuel bad public policy and research that overshadows the benefits of natural gas. Studies like the recent one from the Environmental Defense Fund that used the overestimate to suggest that Natural Gas powered vehicles are no cleaner than gasoline vehicles will continue until such time as EPA revises its published emissions data. And this will take several years.

This concludes my testimony. Thank you.