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Review of Recent Environmental Protection Agency Air Standards for Hydraulically Fractured Natural Gas Wells and Oil and Natural Gas Storage

Witnesses:

Panel 1

Gina McCarthy

Assistant Administrator for the Office of Air and Radiation, U.S. Environmental Protection Agency

Panel 2

Fred Krupp

President, Environmental Defense Fund

John Corra

Director, Wyoming Department of Environment Quality

Tisha Schuller

President and CEO, Colorado Oil & Gas Association

Darren Smith

Environmental Manager, Devon Energy Corporation

William Allison

Director, Air Pollution Control Division, Colorado Department of Public Health and Environment

Subcommittee Members Present:

Thomas Carper (D-DE), Chair

John Barrasso (R-WY), Ranking Member

Ben Cardin (D-MD)

Mike Johanns (R-NE)

Jeff Merkley (D-OR)

Jeff Sessions (R-AL)

Full Committee Members Present:

James Inhofe (R-OK), Ranking Member

Kirsten Gillibrand (D-NY)

Tom Udall (D-NM)

On June 19, the Senate Committee on Environment and Public Works' Subcommittee on Clean Air and Nuclear Safety held a hearing to discuss the Environmental Protection Agency's (EPA) air standards for hydraulically fractured natural gas wells and oil and natural gas storage. These rules would be the first federal air standards issued for hydraulically fractured natural gas wells. It would federally regulate other sources of pollution in the oil and gas industry. The EPA finalized requirements for the New Source Performance Standards (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) in April 2012 and they will be implemented in 2015. The new source performance standards are meant to reduce emissions of volatile organic compounds (VOCs) and sulfur dioxide from oil and gas operations. The hydraulic fracturing process and its associated equipment have been criticized for emitting significant amounts of VOCs and methane through leaks. The rules require new hydraulically fractured gas wells to use green completion technologies which limit emissions and produce byproducts of methane and other hydrocarbons for producers to sell.

Senator Thomas Carper (D-DE) gave his opening statement discussing the "boom" in natural gas and how hydraulic fracturing has helped in the growth. Hydraulic fracturing is estimated to be used in "11,400 new fractured wells each year." Carper said that without responsible use, hydraulic fracturing can release methane and other pollutants that form ozone and can cause cancer. Carper said that methane's global-warming potential is 20 times more potent than carbon dioxide. Colorado and Wyoming were the

only two states requiring the capture of these emissions prior to the release of the EPA regulations. Carper said the regulations are a “win-win solution” for industry and environment. He said this will be achieved by reduced emissions completions or green completions. Carper noted the EPA has provided a “reasonable schedule” for green completions, allowing producers until 2015 to fully comply. He closed by saying shale gas formations have “enormous potential” but must be “utilized responsibly.”

Ranking Member Senator John Barrasso (R-WY) gave his opening statement by noting the White House says natural gas is a “viable alternative” to coal and continued by saying the “rhetoric [...] does not match the actions.” He cited an article from *Bloomberg* where Dave McCurdy, president of the American Gas Association, and Jack Gerard, president of the American Petroleum Institute, pointed out that a “dozen federal agencies were considering various rules or policies that could deal drilling a setback.” Barrasso brought up the Utility Maximum Achievable Controllable Technology (MACT) rule, saying it makes it “nearly impossible” to build new coal-fired power plants. He discussed the Sierra Club and their “Beyond Natural Gas” campaign. He quoted the director of the club who said, “we’re going to be preventing new gas plants from being built wherever we can.”

Senator James Inhofe (R-OK) began his statement by re-iterating the Utility MACT rule, which he said would “essentially do away with coal in America.” He quoted witness Fred Krupp, who said, “Given the dysfunction in DC, a state by state approach would be more effective.” Inhofe said he agrees with the statement. He pointed out that EPA Administrator Lisa Jackson said there was no case of groundwater contamination from hydraulic fracturing. He closed by saying that America cannot run “without fossil fuels.”

Senator Ben Cardin (D-MD) began his opening statement by replying to Inhofe’s and Barrasso’s comments. He said the Obama administration has been “sensitive” to energy issues. Cardin continued by saying pollution “knows no state boundary.” He said this is a “national problem” and needs “national solutions.” He further noted that “if we get this [clean air regulations] done right, we can expand our natural gas collections in this country in a way that’s more cost-effective and also will reduce pollutants.”

Senator Tom Udall (D-NM) gave a brief opening statement saying how “natural gas has great potential.” He said that the industry would need to “minimize” environmental impact “to maximize its potential.”

Gina McCarthy then gave her testimony by saying how the standards would not slow natural gas production and would yield cost savings. McCarthy said in the past year net imports of oil have decreased by 10 percent. She said the administration is “committed to the development” of important domestic resources and that this occurs “safely and responsibly.” McCarthy said a reduction between 190,000 and 290,000 tons of VOCs is expected with the new rules each year. As a result of the standards, reduction of air toxic emissions is estimated to be 12,000 to 20,000 tons each year and reduction of methane emissions is estimated to be 1 to 1.7 million tons per year. She said VOCs emissions can be controlled through flaring or green completions until January 2015, when green completions will become required. This gives industry a transition time. Green completions are already implemented at about half of the hydraulically fractured domestic natural gas wells. McCarthy pointed out how the rules were “aligned with existing programs” in states.

Carper began the questions asking what changes had been made from the original proposal. McCarthy said they “increase[d] compliance flexibility.” She mentioned the “phasing process” of green completions. She said they added a subcategory for areas in the U.S. where geologic formations do not allow green completions to be cost-effective and removed some “downstream transmission areas” requirements where VOC content is lower. Carper then asked about the potential for over-estimates on emissions from wells. McCarthy said the EPA data is “reasonable,” with four case studies and 1000 wells used in an EPA assessment.

Barrasso asked McCarthy about the Utility MACT rule and what would happen to coal communities. She replied that coal has a “lack of competitiveness against natural gas” and it is not only the rules, but a “market issue.” Barrasso then asked how to “tap the gas” if EPA continues with the proposal to “create more non-attainment areas.” McCarthy said coal is a large portion of the energy supply and will remain at the same level.

Inhofe asked if the administration thinks natural gas is a long term part of our domestic energy supply or only “a bridge.” McCarthy cited a change in the energy supply and how natural gas is becoming the “fuel of choice that’s driven by the market.” Cardin asked if the EPA evaluated the cost-benefits of the regulations; the benefits in regards to communities and the costs of meeting compliance. McCarthy said they had and discussed the Mercury and Air Toxic Standards (MATS) benefits to public health.

Senator Mike Johanns (R-NE) explained how Nebraska was not included in the original development of the EPA standards until the very end and was then told to comply in six to eight months. He said it is “not humanly possible to comply.” He asked why this is a reasonable approach by the EPA. McCarthy clarified the situation with Nebraska, noting the Cross-State Air Pollution Rule (CSAPR) replacing the Clean Air Interstate Rule (CAIR). She said the “program” started with the CAIR, which began equipment installation.

Senator Jeff Merkley (D-OR) asked why companies are voluntarily doing the green completions program before the compliance date. McCarthy noted the cost savings and the “Natural Gas STAR” program. This EPA program promotes discussion between

industry members to implement emission reduction technology at their sites.

The second panel began with testimony from Fred Krupp. He began by noting his service on the Secretary of Energy Advisory Board Natural Gas Subcommittee. This subcommittee recommended ways to “address the safety and environmental performance” of hydraulic fracturing. The two “central considerations” were the fast expansion of shale gas in U.S. energy and public health and environmental concerns due to this growth. Krupp said that clean air policies “must reduce pollution, protect people, the environment and communities.” He closed with several quotes from organizations, including a public statement from Southwestern Energy which said, “What we do today with reduced emissions completions in our wells doesn’t cost us any more than just venting the gas into the atmosphere.”

John Corra began his testimony by mentioning the 36,000 oil and gas wells in Wyoming that were not under federal regulation. Fifteen years ago, the state realized the need to manage these oil and gas sources. Corra discussed Wyoming’s “three-tiered approach” which accounts for differences in “intensities of development.” He stated that even though Wyoming’s amount of wells and gas production has increased since 2008, emissions of VOCs and nitrogen oxides have decreased from winter 2009 to winter 2011. Corra closed by noting the “flood of new regulations” from EPA and the lack of funding to help meet these issued regulations.

Tisha Schuller began her testimony by discussing two air emission regulations. First, she discussed Colorado’s Regulation Number 7 which reduces ozone precursors. Second, Rule 805, added in 2008, states that green completions are to be used when “technically and economically feasible.” This rule encouraged the capture of natural gas and reduction of odors. Schuller listed concerns with the EPA regulations including over-estimated emission estimates, compliance requirements, and economics.

Darren Smith began his testimony by stating Devon Energy “does support responsible regulations,” but is against “unreasonable” regulations “grounded on unsound science.” Smith focused his testimony on the over-estimates on data used by the EPA. He said data was reported to EPA via the Natural Gas STAR program, which he said “came from three companies.” Smith said this program reports “gas captured, not gas emitted.” He closed by saying there are concerns that “continued policy research is going in the wrong direction.”

William Allison began his testimony by saying Colorado uses hydraulic fracturing as a standard practice for “virtually” all oil and gas wells. He said federal rules would give a “level playing field” nationwide. He mentioned the use of low-bleed or no-bleed valves which abide by EPA’s rule. Allison said he supports “continued and adequate” congressional funding to ensure EPA and the states can implement these rules.

Barrasso asked Corra about the flexibility of local compared to national rules. Corra said that Wyoming’s ability “to implement policies and have agreement on those policies [...] has been essential for us to act swiftly.”

Senator Jeff Sessions (R-AL) asked Smith where green completion is not working. Smith said places with “no infrastructure.” He further stated that the new NSPS rule from EPA has text that is “problematic for operators that are developing in new areas.”

Carper asked if the EPA has given enough time to comply with the standards. Schuller said that industry will be able to meet most, but problems will arise around manufacturing and implementation. Carper closed the hearing by posing one final question to the panel asking each person to give a quick idea of how to make the EPA rule better. Krupp noted how the rule only applies to new wells and standards should apply to existing wells. Corra said not to “over emphasize the importance of allowing states to have the flexibility to implement [the rules] according to the conditions in their own states.” Schuller said compliance needed to be modified so operators can adapt. Smith said the need to make sure “credible science is used.” Allison pointed out how the rules only apply to gas wells.

Witness testimonies, opening statements and an archived web cast is available at the committee web site.
