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Opportunities and Challenges for Natural Gas

Witnesses:
The Honorable John Hickenlooper
Governor of Colorado
Andrew Liveris
Chairman and Chief Executive Officer, The Dow Chemical Company
Ross Eisenberg
Vice President, Energy and Resources Policy, National Association of Manufacturers
Frances Beinecke
President, Natural Resources Defense Council
Kenneth Medlock
Senior Director, Center for Energy Studies, James A. Baker III Institute for Public Policy, Rice University
Jack Gerard
President and Chief Executive Officer, American Petroleum Institute
Committee Members Present:
Ron Wyden (D-OR), Chairman
Lisa Murkowski (R-AK), Ranking Member
Maria Cantwell (D-WA)
Debbie Stabenow (D-MI)
Mark Udall (D-CO)
Al Franken (D-MN)
Joe Manchin (D-WV)
Christopher Coons (D-DE)
Martin Heinrich (D-NM)
John Barrasso (R-WY)
Mike Lee (R-UT)
Lamar Alexander (R-TN)
John Hoeven (R-ND)

On February 12, 2013, the Senate Committee on Energy and Natural Resources held a hearing to receive testimony assessing the opportunities and challenges facing the U.S. with regard to natural gas. The recent and ongoing oil and gas boom in the U.S. has created a need to reevaluate projections for oil and gas production, exportation, regulations, and more.
Chairman Ron Wyden (D-OR) began his opening statement declaring, “When it comes to natural gas, America is the land of opportunity.” He outlined some of the benefits of natural gas as giving the U.S. a “competitive advantage” in the energy market, initiating a “manufacturing renaissance,” and increasing national security. Natural gas is also 50 percent cleaner than other fossil fuels and contributed to the decrease in U.S. carbon dioxide emissions, noted Wyden. He stated that “production could soon outstrip American demand” raising issues of exporting liquid natural gas (LNG). He focused on the need to find a “sweet spot” that will “strike a balance between the environmental and economic” impacts.
In her opening statement, Ranking Member Lisa Murkowski (R-AK) pointed to the economic improvements and job creation in states that host the natural gas industry. She noted the 44 percent increase in resource estimates associated with the “natural gas boom.” Advantages of the boom include “abundant clean energy,” “economic growth and security,” and fixing of the trade imbalance should the U.S. begin exporting LNG. She raised the issue of regulations, noting that geology differs from region to region and policymakers should rely first on state regulations. Rather than simply implementing blanket nationwide rules and standards, the government should “look at existing laws and determine where there are deficiencies” and address them.
Governor John Hickenlooper (D-CO) opened his testimony discussing the “three interconnected issues facing our country right now”—economic recovery, national security, and climate change—and stating that the “crux of each of them is energy.” Natural gas offers the prospect of jobs, domestic industrial development and investment, less dependence on foreign oil, and lower emissions, Hickenlooper indicated. He stated that he believes the U.S. is “on the threshold of achieving energy independence,” but that the “future is more secure with energy that is sustainable and renewable” and the U.S. needs an “all of the above policy.” Between

2005 and 2012, U.S. importation of oil decreased from 60 to 41 percent.

Hickenlooper focused primarily on how to best regulate natural gas extraction. He emphasized the need to “take full advantage of technology” while “ensuring that we have the strongest safeguards we could possibly have.” Colorado passed a law requiring disclosure of the contents of hydraulic fracturing fluids and is requiring green completions, “robust” groundwater monitoring, and assurance of well integrity. Additionally, universities are studying air quality around fracturing fields. He declared the state’s primary goal as ensuring “sufficient” and “balanced” public and industry involvement to create a level of transparency that provides the public with confidence that they are not “working against some unseen villain.” He hoped that Colorado’s state regulations could offer a national model.

In his testimony, Andrew Liveris, chairman and chief executive officer of the Dow Chemical Company called natural gas “essential for American industry, and growth in shale gas production...a bright spot for the U.S. economy.” He discussed the manufacturing “renaissance” that has resulted substantially from the “reasonable and stable natural gas prices,” and will inspire new investments in U.S. based production facilities and create “approximately 5 million manufacturing jobs.” Liveris noted that manufacturers “conduct two-thirds of U.S. research and development.” Policies, he noted, greatly affect natural gas supply and demand, price, investments, and job creation; therefore, Liveris urged caution in developing policies encouraging using natural gas over other resources, exporting LNG, and enacting “unreasonable” regulations.

Ross Eisenberg, vice president of Energy and Resources Policy for the National Association of Manufacturers (NAM) highlighted in his testimony the fact that manufacturers represent a third of U.S. energy consumption and stated, “Natural gas is a critical component of an “all-of-the-above” energy strategy that embraces all forms of domestic energy production.” A PricewaterhouseCoopers report that he cited indicated “full-scale and robust development of U.S. shale gas plays could result in 1 million new manufacturing jobs by 2025.” He added that the natural gas boom would draw companies to move production to the U.S. and positively impact manufacturers “across the supply chain.” Summarizing the NAM’s position, Eisenberg stated that “if the federal government takes an overly prescriptive or reactive approach to permitting, regulations, or exports, then our natural gas fueled manufacturing renaissance will be over quicker than it began.” He agreed with Hickenlooper that regulation should be state-based.

President of the Natural Resources Defense Council Frances Beinecke stated in her testimony that “shale gas is changing our nation’s energy profile,” but pointed out that “natural gas, even if properly produced and consumed, is not a panacea for our energy challenges. It is still a fossil fuel, burned it produces fossil fuel pollution and contributes to climate change.” She called into question the current exemption of hydraulic fracturing from the Clean Water Act, Safe Drinking Water Act, Clean Air Act, and other regulatory laws. She emphasized a need for federal safeguards as opposed to a “patchwork” system of state regulations. Beinecke stated that there is “mounting” evidence of the damaging effects of fracturing and that “people want to know that their water is safe, that their air is clean, and that their lands and farms are protected...[and] their children are healthy.” She was in favor of a policy that would increase use of renewables and improve efficiency.

In his testimony, Kenneth Medlock, senior director of the Center for Energy Studies at James A. Baker III Institute for Public Policy at Rice University, stated that the U.S. regulatory system has created “arguably the most efficient market in the world” as any consumer or producer can access it. The current regulatory system “encourages competition, entrepreneurship,” and is the reason behind the current “shale gale.” He argued “anything that stands to disrupt this very well functioning market…would be a detriment to this country and to the natural gas industry.” Medlock noted that the three countries most affected by the natural gas boom will be Russia, Iran, and Venezuela which raises significant geopolitical issues. Finally, he discussed how natural gas generated more power than coal in 2012, carbon dioxide emissions fell to the lowest levels since the 1990s, and the Environmental Defense Fund is examining methane leakage from the wellhead to end use.

Jack Gerard, president and chief executive officer for the American Petroleum Institute stated in his testimony that the developments in natural gas are a “game changing opportunity” and have resulted in the “emergence [of the U.S.] as a superpower in global energy production.” He emphasized the role of oil and gas in creating American-based jobs given that “unconventional natural gas production supports 1.7 million [upstream segment] jobs.” Such jobs are expected to increase to 2.5 million by 2015, 3 million by 2020, and 3.5 million by 2035 with unconventional natural gas and oil generating over $2.5 trillion in tax revenues by 2035. He touched on geopolitical issues referring to LNG exports and the ability to “improve our trade deficit and spur major investment in infrastructure, which will strengthen our energy security.” Gerard also noted the reduction in U.S. carbon emissions to 1992 levels and credited this mainly to the growing use of natural gas.

Much of the question and answer session was spent discussing the prospect of LNG exports. Liveris prominently emphasized the need to be “careful of unintended” consequences of exports and to approach the issue cautiously. One potential consequence he noted was the risk of “indexing the domestic gas price to the global oil price.” This could occur, he argued, because while the U.S. has a domestic gas price, the “world gas market doesn’t exist” and gas prices are set at the same level as oil prices. Medlock disagreed stating that gas prices were set at the level of oil because the gas market lacked liquidity which is “gained as the market matures” and is a process that shouldn’t be hindered.

Wyden asked the witnesses for recommendations on finding the “sweet spot” in natural gas policymaking “where American can have it all: economic growth, lower emissions, cheaper power, and reduced trade deficit.” Hickenlooper cited the need for “appropriate regulations.” Liveris stated that the U.S. should continue to “follow current laws and regulations,” be cautious in moving forward to enact “responsible regulations” and ensure that supply and demand don’t become unbalanced. Eisenhower focused on the need to streamline and speed up permitting. Beineke replied that issues of public protection and increasing public confidence in gas extraction processes and safeguards are essential. Medlock indicated a need for transparency and stated that markets should be left free to respond naturally. Gerard seconded allowing the market to “sort out and adjust” for the natural gas boom and exports. Murkowski asked Hickenlooper if he thought the U.S. needed federal regulations on hydraulic fracturing on top of the Colorado state regulations, or if they would add an “unnecessary layer” of rules. Hickenlooper responded that “states are the laboratories” indicating a hope that “federal regulations would be modeled after [those of] a group of states” rather than added on top of state regulations. He referred to the state-based plan as a “template” allowing “different states to work together with the federal government…[to] cut the red tape and yet still maintain a very high and rigorous set of regulatory environments.”

John Hoeven (R-ND) also inquired as to the “state’s first approach” asking about transparency, regional differences, and building consensus. Beinecke advocated that there be “federal minimal standards” but did not discount the prospect of regulations created by a state becoming the federal standard. She noted that there are regional differences in geology to take into account and stated that “most [federal] environmental laws recognize” differences from state to state. She emphasized the need to make people “confident that standards will protect them” and bring together all of the stakeholders to address concerns. Gerard stated that regulations at the federal level should not be rushed and regulation should start at the state level.

Environmental questions focused on methane emissions and increasing renewable energy use and development. Mark Udall (D-CO) stated that committee’s primary goal should be to “protect the health and well being of citizens” and asked about fugitive methane emissions from natural gas extraction. Hickenlooper stated that the issue of methane emission is “crucial” as methane is “very harmful” and extensive loss will negate much of natural gas’s environmental benefits. The University of Colorado is studying air quality to obtain data on methane leakage. He noted that this methane is a product that companies can capture and sell. Beinecke indicated a need for measuring methane loss, monitoring air quality, and implementing technology to reduce fugitive emissions.

Udall and Al Franken (D-MN) raised the fact that oil and gas is the second largest methane emitter in the country. Franken promoted investing in renewable technology development now given that the Department of Energy invested in research in the 1970s that paid off 30 years later with the current natural gas boom. Medlock agreed and praised the “remarkable foresight” of government investment. Hickenlooper also agreed but noted that renewables can be intermittent and that natural gas is the “perfect partner” for renewables to ensure efficient and consist power.

Maria Cantwell (D-WA) inquired about responding to climate change so as to reduce future spending on natural disasters. Beinecke insisted that “natural gas isn’t a solution in the long term” and that there needs to be a switch to renewables. She again mentioned the unknown potential health consequences and “lack of safeguards” associated with natural gas.

Opening statements, witness testimonies and an archived webcast of the hearing can be found on the Committee web site.

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