Time for Action: New KBH Center Study Urges Tougher Regulation to Control Gas Leaks from the Aging Pipeline System

Romany Webb

September 30, 2015

1970. Richard Nixon was President. The environmental movement was gaining momentum, celebrating the first Earth Day, and securing establishment of the Environmental Protection Agency (EPA). Many now ubiquitous technologies were just being developed, with the first jumbo jet entering into service, and personal computers still several years away. From these examples, it may seem as though a lot has changed over the last forty-five years. Some things have, however, remained the same. Much of the infrastructure we use today dates from the 1970s or before. Indeed, nearly forty percent of the pipelines used to transport natural gas from production fields to customer premises are over forty years old.

As previously reported, many older gas pipelines were manufactured from cast iron or bare steel, which is prone to corrosion. This can lead to gas leaks, threatening public safety, and causing environmental damage. Natural gas is comprised principally of methane, a short-lived but potent greenhouse gas, which may accelerate climate change. It is, therefore, vital to prevent methane leaking from pipelines and other infrastructure.

Encouraging pipeline replacement

Concerned about the potential for gas leakage, in March 2012, the Department of Transportation's Pipeline Safety and Hazardous Materials Administration (PHMSA) issued an advisory bulletin urging pipeline operators to replace aging pipes. Unfortunately however, many pipeline operators have been reluctant to invest in pipeline replacement, due to uncertainty over their ability to recover costs. Seeking to address this problem, the Federal Energy Regulatory Commission and many state public utility commissions have established programs making it easier for operators to recover the costs of pipeline replacement. Regular readers of this blog will recall that we wrote about those programs last year.

Even with these programs, however, replacement of aging pipeline systems is expected to take decades. In the interim, the systems will likely experience increasing rates of gas leakage. Additionally, leaks may also occur on newly installed pipelines due to earth movement, third-party damage, equipment defects, and other causes. While there is no consensus on the extent of pipeline gas leaks, recent studies indicate that they could be significant. As regular readers of this blog will recall, one study published earlier this month found an average of one leak every quarter mile, in some areas. Other studies have also found similarly high rates of gas leakage.

While most pipeline repairs are typically inexpensive, the sheer number of leaks makes instituting a comprehensive repair program costly. With the recent decline in gas prices, to less than $3 per million British thermal units, it may not make economic sense for pipeline operators to repair leaks. Compounding this problem, operators can generally recover the cost of leaked gas from their customers, further undermining incentives for leak repair. (For a discussion of this issue, see my previous blog here.)

Web2PDF
converted by Web2PDFConvert.com

So, what can be done to ensure the prompt repair of pipeline leaks? That question is the subject of a new report, published today, by the KBH Energy Center. The report analyses the existing regulatory regime governing pipeline leaks and recommends much needed changes designed to encourage improved leak management.

Existing regulation of gas pipeline leaks

Regulatory authority over gas pipelines is shared between the federal government and the states. At the federal level, the Department of Transportation's PHMSA regulates pipelines with a view to ensuring public safety. PHMSA regulations establish minimum requirements applicable to all pipelines nationwide. Pipelines may also be subject to additional or more stringent requirements imposed by the states. (Note, however, that the state-based rules only apply to pipelines located entirely within the boundaries of the relevant state (i.e., intrastate pipelines). Other (interstate) pipelines are subject only to the federal regulations.)

Both the federal and state pipeline safety regulations include provisions designed to reduce gas leakage. The focus of these regulations is, however, on preventing and controlling leaks that pose a hazard to public safety. The regulations do little to address other leaks that, while not hazardous to the public, may damage the environment.

Recognizing that gas leaks contribute to atmospheric methane, thereby worsening global climate change, the Obama Administration has committed to reducing such leaks. Back in January, President Obama directed the EPA to establish rules limiting methane emissions from certain gas transportation facilities. The EPA unveiled draft rules, applying to new and modified facilities, in August. Building on these rules, other agencies are also expected to announce new measures, addressing emissions from existing facilities. The PHMSA, for example, is working on an update to its regulations governing pipeline leaks.

How our report fits in

To inform this update process, the KBH Energy Center has identified a number of simple changes to the regulations, to encourage improved leak management. We recommend that the regulations be updated to:

- **Require more frequent pipeline surveys to detect leaks:** Whereas existing regulations typically only require annual leak surveys in built-up areas, going forward, pipelines in remote locations should also be surveyed annually. More frequent inspections may be needed on high-risk pipelines.

- **Ensure prompt repair of all pipeline leaks:** Existing regulations only require leaks posing a hazard to the public to be repaired promptly and allow other, non-hazardous leaks to be left unrepaired. In the future, all leaks should be repaired immediately upon discovery or within one year thereafter.
- **Compel accurate measurement of leaks:** Pipeline operators often do not measure the size of leaks, making it difficult to assess the extent of methane emissions. To facilitate such assessment, pipeline operators should be required to accurately measure gas leaks, and report the results to PHMSA.

We encourage the PHMSA, as well as state pipeline regulators, to consider these and other policy changes. The changes would help to ensure that pipeline leaks are detected and repaired promptly, thereby protecting public safety, and mitigating climate change.

climate change FERC fracking greenhouse gas emissions methane natural gas pipeline Pipeline and Hazardous Materials Safety Administration shale gas

Leave a Reply

Your email address will not be published. Required fields are marked *

Name *

Email *

Web2PDF
converted by Web2PDFConvert.com

Website

Comment

POST COMMENT

The KBH Energy Center blog is a forum for faculty at The University of Texas at Austin, leading practitioners, lawmakers and other experts to contribute to the discussion of vital law and policy debates in the areas of energy, environmental law, and international arbitration. Blog posts reflect the opinions of the authors and not of The University of Texas at Austin or the KBH Energy Center.

Popular Tags

Texas (60)

water (48)

energy (28)

natural gas (21)

climate change (21)

fracking (19)

oil and gas (19)

drought (17)

greenhouse gas emissions (14)

epa (13)

endangered species (12)

coal (12)

Clean Air Act (10)

groundwater (9)

methane (9)

Copyright © The KBH Energy Center · University of Texas at Austin · School of Law · McCombs School of Business

Web2PDF
converted by Web2PDFConvert.com

Web2PDF
converted by Web2PDFConvert.com