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METHANE:
DOE discloses first steps to curb leaks in natural gas

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Energy Secretary Ernest Moniz yesterday announced preliminary initiatives to combat leaks of the potent greenhouse gas methane from pipelines, compressors and other parts of the natural gas distribution infrastructure.

The Department of Energy is taking first steps to look into mandatory energy efficiency standards for natural gas compressors, which are devices that compress gas and push it down pipelines. The devices are estimated to use up 7 percent of the gas consumed in the United States.

DOE will also suggest to the pipeline regulatory authority, the Federal Energy Regulatory Commission, that it explore funding mechanisms to replace older, leaky pipelines with new ones. The funding could be folded into natural gas pipeline transportation rates. Currently, pipeline replacements are paid for by ratepayers in states through their electricity bills, which slows the pace of replacements.

"These efforts may include additional consideration of a simplified cost recovery mechanism for gas transmission companies who replace old and inefficient compressors and leak-prone pipes and perform other infrastructure improvements and upgrades to enhance the safe and reliable operation of the pipeline," DOE said.

However, the decision to swap out leaky pipelines would remain largely at the discretion of utilities, a fact that green groups and climate scientists criticized. They kept their eye on the bigger ball, that is, U.S. EPA's consideration of new regulations under the Clean Air Act to mandate that the entire natural gas sector cut methane leakage from the wellhead to the burner (EnergyWire, March 31).

"As helpful as DOE's actions are, there is no substitute for clear, effective federal regulation of methane emissions from oil and gas," said Armond Cohen, executive director of the Clean Air Task Force, in a statement.

2-pronged approach

EPA estimates that 0.35 to 0.70 percent of the gas carried in pipelines leaks to the atmosphere, and much of the leakage is from older cast iron and steel pipes. Methane also leaks from upstream oil and gas extraction, a fact that has worried observers of the fossil fuel industry. Natural gas extraction has increased apace in the last decade due to technological advances that have unlocked previously untapped reserves and vaulted the United States ahead of Russia and Saudi Arabia.

Given that methane is 86 times more potent a greenhouse gas than carbon dioxide on a 20-year time scale, President Obama instructed both EPA and DOE to explore initiatives to reduce leakage. EPA is exploring regulations for the upstream oil and gas sector, while DOE set up round tables with labor unions, industry and nongovernmental organizations to tackle leaks from the distribution pipelines (EnergyWire, May 21).

The final round table in the series was held yesterday in Washington, D.C., by Dan Utech, the special assistant to the president for energy and climate change, and John Holdren, the assistant to the president for science and technology, as well as Podesta and Moniz. It was attended by representatives of green groups, industry and labor unions.

At the round table, Moniz announced that DOE will also launch research programs in collaboration with industry to improve the natural gas system's "efficiency" and reduce leaks. A separate program will target sensors to detect leaks of the greenhouse gas remotely and communicate the information to operators.

The programs are direly needed, as EPA's inspector general criticized the agency last week for not doing enough to curb leaks from the distribution sector (Greenwire, July 25).

Part of the reason local distribution companies have not cut down on leaks from pipelines is that the benefits accrue to consumers and not to the companies, the IG found. A funding mechanism would promote timely replacements of pipelines, it found.
Disputes over voluntary approaches and measurement

Utilities announced a slew of voluntary measures to cut down leakage. National Grid said it would invest $6 billion over the next five years in part to replace pipelines.

"National Grid is committed to working with the Administration, federal and state regulators, other energy companies, local communities, and other stakeholders, to bring the nation's energy network into the 21st century," the utility said in a statement.

John Kassel, president of the Conservation Law Foundation, praised the efforts of National Grid and other utilities present at the round table but also stressed that comprehensive regulations should be in place.

"What was discussed today were voluntary measures that the industry has spent a lot of time, in good faith, working on," he said. "I think we heard from very progressive-minded and forward-thinking companies, and I applaud them for that.

"But there needs to be broad regulatory mandates to make sure that all players in the industry do the best they can," he added.

Meanwhile, scientists at the round table submitted a letter to Holdren and Moniz taking issue with EPA's sole use of a 100-year time scale for calculating the global warming potential (GWP) of methane. EPA uses outdated numbers, assuming that the gas is 25 times as potent than CO2 on a 100-year time scale, while the current state of knowledge indicates it is 34 times as potent (EnergyWire, Oct. 1, 2013).

EPA does not use a 20-year time scale for the GWP of methane for its regulatory con-

sidерations. Studies have suggested that solely using a 100-year GWP of 25 times will not help the United States achieve its emissions reduction targets.

This could make all the difference as EPA decides whether to regulate the greenhouse gas under the Clean Air Act, the scientists said. The letter was signed by Michael Mann, director of the Earth system science center at Pennsylvania State University; Scot Miller, a graduate student and methane researcher at Harvard University; Eric Davidson, an adjunct senior scientist at Woods Hole Research Center; and others.

"Choosing the appropriate GWP is also important to ensure that emission reductions actually accomplish commitments to slowing global warming," the letter states.