Testimony of Erik Milito, Upstream Director
American Petroleum Institute
Before the Subcommittee on Environment
House Committee on Science, Space and Technology
Hearing on EPA's Methane Regulations
September 15, 2016

The dramatic resurgence of the United States as an energy superpower over the past decade has provided tremendous benefits for the country, with significant savings in energy costs for everyday Americans, critical national security improvement, and environmental benefits from the application of advanced technologies and the increased use of clean-burning, abundant natural gas. The U.S. oil and natural gas industry has proven that we can develop the energy that our economy relies upon here at home, while ensuring that those resources are developed safely and responsibly. This includes developing and applying technologies and best practices that effectively reduce emissions of methane, which is the key component of natural gas and thus a vital product for our industry to bring to the U.S. market.

API represents over 625 oil and natural gas companies, leaders of a technology-driven industry that supplies most of America's energy, supports more than 9.8 million jobs and 8 percent of the U.S. economy, and, since 2000, has invested more than $3 trillion in U.S. capital projects to advance all forms of energy, including alternatives. API's members are at the forefront of technology advancement and innovation and include many of the nation's largest producers of oil and natural gas.

Nationwide, as well as globally, there is an increasing reliance on the usage of natural gas. This has been made possible in the United States as a result of the application of the advanced engineering technologies of hydraulic fracturing and horizontal drilling. These technologies have unlocked significant quantities of natural gas once thought inaccessible, and have elevated the U.S. to the world's largest producer of natural gas. Furthermore, due to industry's leadership in the deployment of mitigation measures and investment in new technologies, petroleum and natural gas companies are reducing their releases of all greenhouse gases (GHGs), and in particular methane. North

American investments in GHG mitigating technologies are estimated to have totaled $431.6 billion (2010 dollars) between 2000 and 2014. U.S. based petroleum and natural gas companies invested an estimated $217.5 billion in GHG mitigating technologies, significantly more than other U.S. based private industries, which invested an estimated $102.8 billion, and the Federal Government, which invested an estimated $111.3 billion.[i] The industry clearly is a leader in reducing emissions, without the imposition of additional regulations.

Natural gas is an extremely clean burning fuel. According to the Energy Information Administration, use of natural gas has surpassed coal in generating electricity, and carbon dioxide (CO2) emissions from the power sector are at 20 year lows, primarily due to the increased use of natural gas for electricity generation.[ii] Increased use of natural gas has also led to lower emissions of criteria pollutants such as sulfur dioxide (SO2), nitrogen dioxide (NO2) and fine particulate matter (PM).

Additionally, it is expected that natural gas will remain important to many sectors of the U.S. economy, including electricity generation, industrial heating, chemical feedstocks, and residential and commercial water and space heating.[iii] In its 2016 Annual Energy Outlook (AEO), the EIA projects that U.S. natural gas consumption will rise, an average of about 1% annually to 2040.[iv] The industrial and electric power sectors make up 49% and 34% of this expected growth, respectively, while consumption growth in the residential, commercial, and transportation sectors is projected to be much lower.

The EPA's U.S. greenhouse gas inventory (GHGI) is comprised of emission estimates for seven GHG compounds or groups of compounds. When examining emissions from 1990-2014, methane emissions from natural gas systems - associated with the operation of natural gas systems for exploration, production, processing, transmission and distribution – declined from a high of 206.6 million metric tons of carbon dioxide equivalent (MMT CO2e) in 1990 to the current estimate of 176.1 MMT CO2e for 2014, a decline of 14.8 percent.[v] Over the same period of time, U.S. natural gas production increased by 47%. In other words, U.S emissions of methane from the natural gas

sector decreased noticeably during one of the largest increases in natural gas production in the nation's history.

As an aside, EPA's latest GHGI, which provides the data referenced above, also includes retrospective revisions to the annual methane emissions from the natural gas sector. These revisions retrospectively change the methane emissions of natural gas sector in a manner that shows a smaller decrease in methane emission from previous iterations of the GHGI. EPA's retrospective revisions are seriously flawed in the manner in which they extrapolated the data to non-reporting sources and API encourages EPA to correct the inventory.

Industry innovation and a continuous commitment to emission reductions have contributed to methane emission reductions from oil and natural gas sources. Some of the emission reduction technologies implemented by industry include installation of vapor recovery units, development of techniques for reduced emissions during well completions, increased use of lower-emitting pneumatic controllers and pumps, among other things.

Despite the success of the industry in reducing methane emissions, the industry is under threat of various regulations that will impose significant costs without commensurate benefits. The Environmental Protection Agency recently finalized a suite of new regulations targeting our industry. Each of the EPA rules -- Control Techniques Guidelines, Source Determination, Minor Source Tribal New Source Review, and the New Source Performance Standard for the Oil and Natural Gas Sector -- will likely significantly impact on our industry's operations and, collectively, they have the potential to hinder our ability to continue providing the energy our nation demands. These cumulative impacts must be considered in conjunction with the impacts of the lowered ozone standards and the pending Bureau of Land Management (BLM) methane rule, which will likely require costly methane controls for some of the very same emission sources being regulated by EPA. All of this comes on top of State regulation of our industry as well.

More specifically, API has raised numerous concerns with EPA's New Source Performance Standards (NSPS) for the oil and natural gas sector (40 CFR Part 60, Subpart OOOOa). API's comments on the rule are provided for the record. Many of API's concerns stem from the broad applicability of the final rule and the one-size-fits-all approach to regulating an industry that varies greatly in the type, size and complexity of operations. EPA has justified the regulation using economic studies on "average model facilities" without determining whether the resulting control requirements are appropriate for the entire range of sources included in the source category. The rule applies NSPS in unique and unprecedented ways to categories and equipment not previously listed, while relying on unsound legal justification. The notification, monitoring, recordkeeping, performance testing and reporting requirements are significantly more burdensome than justified for the small and/or temporarily affected facilities.

EPA's cost benefit analysis for the rule is unsound. EPA estimates a net $150 million annual benefit from the rule. In order to achieve this net benefit , EPA applied a social cost of methane (SC-CH_4) estimate on the benefit side that is highly speculative, not sufficiently peer-reviewed, and ultimately not suitable for policy applications. Independent review by NERA found that the benefits provided by the rule, after compensating for flaws in EPA's calculation, could be as much as 94% lower. When combined with the revised cost estimates and reduced emission benefits found in API's analysis, the rule could result in net costs of more than $1 billion in 2025. (See attached API RIA comments and NERA report.)

The OOOOa rule discussed above applies to new and modified sources in the oil and natural gas sector. EPA is also now collecting data through an Information Collection Request (ICR) to determine whether or how to regulate existing sources in the oil and natural gas sector. Rather than directly moving to the regulation of existing sources, API supports the ICR as an appropriate step to better understand existing sources. However, EPA's ICR as proposed would be overly expansive and unclear, and, if it

remains unchanged, will not provide relevant, useful data. API's comments on EPA's proposed ICR are provided for the record.

API urges EPA to simplify and streamline the information gathering in the ICR, so that the effort reduces the burden to industry while adequately identifying the appropriate data required for understanding existing sources of methane emissions in our industry.

Specifically, the ICR should:

- Provide operators (the industry) a voluntary process to identify proper contact information prior to mailing either Part of the ICR.
- Reduce the scope and burden of the Part 1 ICR by simplifying the data parameters requested for every well facility.
- Modify the sampling approach proposed in Part 2 for onshore production facilities in a way that will reduce the overall sample size and still meet accuracy goals of the Agency.
- Concentrate the Part 2 information request on options that identify useful life of existing equipment and equipment turnover; engineering limitations for controlling existing equipment; and improving EPA's understanding of production decline and associated impacts on emissions.
- Allow Industry the opportunity to review and comment on future emission estimation methodologies to be used by EPA in developing representative model plants.

In addition, the proposed scope and timelines of the draft ICR are aggressive and unrealistic for the amount of information the EPA is seeking. As drafted, EPA has significantly underestimated the burden associated with responding to the ICR and has not provided realistic response deadlines for operators. API suggests a streamlined scope that provides EPA with relevant data and provides realistic reporting timeframes.

In conclusion, methane emission reduction trends by the industry are now observable despite major increases in the production and use of natural gas. Improved policy measures, removal of bureaucratic barriers, and regulatory certainty are imperative to allow these trends to accelerate and lead to even greater GHG emission reductions, as well as the benefits of reduced air pollutants such as SO2, NO2 and PM. Innovation and technological advancement through the free-market, rather than command and control regulations, have proven to be the solution to environmental questions and should be embraced by regulators and policy makers moving forward.

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[i] T2 and Associates, "Key Investments in Greenhouse Gas Mitigation Technologies from 2000 Through 2014 by Energy Firms, Other Industry and the Federal Government", September 2015; http://www.api.org/~/media/files/ehs/climate-change/2015-t2-key-investments-in-ghg-mitigation.pdf

[ii] EIA, Today in Energy, U.S. energy-related carbon dioxide emissions in 2015 are 12% below their 2005 levels, May 9, 2016; http://www.eia.gov/todayinenergy/detail.cfm?id=26152

[iii] EIA, Today in Energy, Industrial and electric power sectors drive projected growth in U.S. natural gas use, May 26, 2016; http://www.eia.gov/todayinenergy/detail.cfm?id=26412

[iv] EIA, Annual Energy Outlook 2016 Early Release: Annotated Summary of Two Cases, May 17, 2016; http://www.eia.gov/forecasts/aeo/er/pdf/0383er(2016).pdf, U. S. EPA, Greenhouse Gas Inventory Report 1990-2014, April 2016

[v] U. S. EPA, Greenhouse Gas Inventory Report 1990-2014,, April 2016; https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf

Erik Milito, American Petroleum Institute

Erik Milito is the Director of Upstream and Industry Operations for the American Petroleum Institute (API), which is the national trade association representing more than 600 companies involved in all aspects of the oil and gas industry, including exploration production, refining and transportation. Mr. Milito's work covers regulatory and legislative matters related to domestic exploration and production, including access to domestic oil and natural gas resources both onshore and offshore. Prior to his current position, Mr. Milito served as managing counsel covering a host of legal issues, including oil and gas leasing, royalty, environmental, fuels, transportation, safety, and civil justice reform.

Prior to joining API, Mr. Milito served for over four years on active duty in the U.S. Army as a judge advocate, and an additional four years in the U.S. Army Reserve, resigning at the rank of Major. Mr. Milito was assigned to active duty tours in Hawaii, Korea and Aberdeen Proving Ground, Maryland, and he served as a prosecutor, defense attorney and command advisor. Mr. Milito was awarded the Meritorious Service Medal and Army Commendation Medals during his military tenure. After leaving the Army, Mr. Milito worked as a career attorney with the Solicitor's Office of the U.S. Department of the Interior. While at Interior, Mr. Milito worked on oil and natural gas law, employment law, and disability access issues.

Mr. Milito attended the University of Notre Dame on an R.O.T.C. scholarship, and received a bachelor's degree in business administration. Mr. Milito then received his juris doctor from Marquette University Law School, where he was a member of the law review.

Mr. Milito has testified about industry efforts related to offshore drilling safety before the Senate Energy and Natural Resources Committee, the House Natural Resources Committee, the House Committee on Science and Technology, the Senate Subcommittee on Oceans, Atmosphere, Fisheries and Coast Guard, the National Commission on the Deepwater Horizon Oil Spill, and the National Academy of Engineering Investigation of the Spill. Mr. Milito testified before the Senate Energy and Natural Resources Committee and the House Natural Resources Committee on offshore oil and gas issues, and the House Subcommittee on Energy and Mineral Resources in hearings related to development of unconventional oil and gas resources. Mr. Milito testified before the Senate Energy and Natural Resources Committee and the House Natural Resources Committee on the agreement between the United States and Mexico to allow development of oil and natural gas resources along the countries maritime border in the Gulf of Mexico that has since been approved by Congress and the President. Mr. Milito also testified before the House Subcommittee on Nonproliferation, Trade and Terrorism about the importance of crude oil exports to the economy and national security. Mr. Milito has authored and co-authored several journal articles related to natural resources issues, including a chapter in the recently published *Hydraulic Fracturing: Environmental Issues, ACS Symposium Series 1216*. He routinely serves as a keynote and guest speaker on U.S. energy topics, and has appeared on CNN, C-SPAN, FoxNews and various other news outlets.

Mr. Milito formerly served on the Board of Trustees of the Rocky Mountain Mineral Law Foundation, and on the Board of Directors of the Alexandria, Virginia Boys and Girls Club. Erik and his wife Beth have four children, Will, Helen, Evie, and Jake and live in Alexandria, VA.