

**Statement for the Record: U.S. Senate Committee on Energy and Natural Resources hearing
on “Shale Development: Best Practices and Environmental Concerns”**

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Proponents of natural gas like to say that all of abundant natural gas is good for the economy and good for the environment. There’s no question that the recent step-change in the supply and price of natural gas is one reason why proposals for new coal-fired power plants have been withdrawn across the country and why old, inefficient, highly polluting coal plants are finally retiring. This has the makings of a good news story for public health, the climate and the environment, but only if we address the significant risks to public health and the environment that are inherent in the production of unconventional natural gas. Doing so requires bi-partisan political leadership, and constructive engagement at all levels of government.

We reject the notion that Americans must accept new pollution from the production, transportation and use of natural gas in order to realize the economic and environmental benefits natural gas can provide to our country. There are steps that can be taken *now* to significantly reduce risk to public health and the environment from unconventional natural gas operations and to maximize the greenhouse gas benefits that natural gas can provide in comparison to coal or oil. As the committee goes about the important work of assessing the future of natural gas in the United States, I respectfully urge you to consider the following three points.

1. Measuring and reducing fugitive methane emissions is an urgent task.

Champions of natural gas like to say that natural gas is a preferred fossil fuel alternative to coal and oil because it has less carbon content than either, and therefore, when burned, produces less carbon dioxide, which is the a primary cause of global warming. This is true.

But what is often not said is that natural gas is primarily made up of methane, which itself is a powerful greenhouse gas pollutant, many times more powerful than carbon dioxide, particularly when methane is first released into the atmosphere. Even small leaks at the wellhead or along the infrastructure used to process and transport the gas to our power plants, homes and businesses can undo much of the greenhouse gas benefits we think we are getting when we substitute natural gas for coal or petroleum sources.

EDF is working with approximately 40 research facilities and around 40 industry partners to gather actual emissions data which we hope will contribute to a better understanding of the magnitude of the problem and opportunities for reductions. The project is nearly halfway through, with all five of the collaborative studies (production, processing and gathering, transmission and storage, local distribution, and natural gas vehicles and fueling stations) launched and with a number of other projects also moving forward.

In the meantime, we know that there are cost-effective steps that can be taken to reduce these emissions and we are advocating for implementation of these measures at the state and federal level. Oil and gas producing states like Colorado and Wyoming have taken the lead in requiring the deployment of many of technologies that control methane emissions, and the recent adoption by EPA of new source performance standards for air emissions from oil and gas production will lead to further adoption of these technologies, but important and necessary opportunities for reductions remain.

Indeed, in our work with the corporate community, we know there are leaders in the private sector who can speak to the opportunities that exist, the technologies that are available, and the ability to achieve environmental improvements without hurting, and in some cases improving, the bottom line. These opportunities exist across the natural gas supply chain, from production well to burner tip. Doing a better job of finding leaks and capturing fugitive methane, a valuable energy resource, is a strategy we should all be able to agree on for our nation to strengthen its energy security, economy and environment.

Minimizing fugitive methane emissions is particularly important as the nation looks to new uses of natural gas, such as for transportation. If this Committee takes up the issue of incentives for the development of natural gas vehicles and infrastructure, addressing methane leaks across the supply chain should be front and center in your deliberations.

2. Air pollution from unconventional production is a public safety concern that needs to be addressed.

Unconventional oil and gas operations present a significant air quality challenge to regions with intensive development activity. Communities where development is taking place are seeing declining air quality, up to and including an exceedance of the federal health standard for ground level ozone (also known as smog), a toxic air pollutant that can lead to host of respiratory problems, particularly for the elderly and children. This has been seen in places like the Pinedale region of Wyoming, where no such problems existed prior to the start of intensive development.

Wyoming and Colorado are two states that have taken a lead in addressing this problem, and EPA's efforts to address this at the national level have benefited from the leadership of these states. But important gaps remain in both state and federal air quality regulations, particularly for existing sources. EDF is actively pursuing implementation of cost-effective commonsense measures that can be carried out to improve air quality.

We also believe that more needs to be done to improve monitoring for air quality regionally and at the facility level. We ascribe to the belief that you can't manage what you don't measure, and believe that industry and communities will be better served by having real air quality data at

hand on which to assess the need for measures to reduce air pollution and protect public health and the environment.

3. **“Centers of Excellence” Can Be Helpful to Industry and Regulators**

Both the National Petroleum Council and the Secretary of Energy’s Energy Advisory Board have noted the importance of creating “centers of excellence” where gas and oil producers can develop and disseminate ‘best’ or ‘leading’ practices for minimizing risks to public health and the environment that are inherent to unconventional oil and gas production. EDF, in partnership with gas producers and several other environmental NGOs, is an active participant in one such effort, the Center for Sustainable Shale Development (CSSD), focused on developing and disseminating leading production practices in the Marcellus Shale, currently the nation’s largest natural gas producing region. Loosely modeled on similar efforts in the nuclear industry (Institute of Nuclear Power Operators) and commercial building sector (U.S. Green Building Council LEED Certification), CSSD is not a substitute for necessary local, state and federal regulation. Rather it is a compliment to regulation by providing a place where companies can advance the understanding of what it takes to protect health and the environment as production techniques continue to evolve in this very dynamic and innovative industry.

Similarly, we encourage you to examine the role that the Department of Energy and other agencies of the federal government can play in supporting efforts, such as a joint initiative of the Interstate Oil and Gas Compact Commission and Ground Water Protection Council announced May 1 by Governor Bentley of Alabama and Governor Herbert of Utah, to promote the development and dissemination of leading regulatory practices among state agencies that are on the frontline in assuring that risks to public health and the environment from unconventional oil and gas development are properly managed and minimized. Agencies around the country (including Bureau of Land Management) can benefit, for example, by studying recent efforts in Texas and Ohio to improve well integrity rules.

Unconventional oil and gas development is heavy industrial activity. And like any industrial activity, there are risks to public health and the environment inherent in producing oil and natural gas. These risks can be minimized but only through strong regulation, enforcement, and attentive and consistent performance in the field, each and every day.

Finally, a balanced national energy policy demands that we not allow the recent abundance and market conditions of natural gas to distract us from pursuing the policies that continue our nation’s progress in developing the energy technologies and services that will help us transition to a fully modern, clean, low-carbon energy economy. Numerous studies demonstrate that natural gas is not a panacea. Investments in energy efficiency and renewables, along with a transmission and distribution grid capable of supporting them, are critical to our nation’s energy future. There is much that the federal government can and should do to accelerate the development and deployment of efficiency and renewables, and I would be pleased and honored to share these ideas with the committee at the appropriate time.