



Statement of the Marcellus Shale Coalition

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The Marcellus Shale Coalition (MSC) is a multi-state organization, founded in 2008 to advance the responsible development of natural gas from the Marcellus Shale geological formation that underlies a number of states, including Pennsylvania, New York, Ohio, West Virginia, and Maryland. Working with state and federal regulators, elected officials and the general public, the MSC seeks to educate, engage and promote natural gas as a clean, job-creating resource with tremendous economic and environmental benefits. The members of the coalition are dedicated to developing this resource safely and efficiently.

Thank you for the opportunity to submit this testimony to the Senate Republican Policy Committee on local impacts of Marcellus Shale Drilling. In terms of "impacts" there are innumerable positive energy and environmental impacts that the responsible development of the Marcellus brings to the Commonwealth. In 2010, we again commissioned economists from the Penn State College of Earth and Mineral Sciences Department of Energy and Mineral Engineering to examine the economic impact of the Marcellus Shale, resulting in the release of *The Economic Impacts of the Pennsylvania Marcellus Natural Gas Play: An Update*, in the spring of 2010. The study shows responsible development of natural gas from the Marcellus shale formation is having a significant impact on the Commonwealth that is being felt locally.

The energy impact of production from the Marcellus and other shale plays in the United States cannot be understated. According to published reports, the U.S. Department of Energy has recently doubled its estimate of available supply of natural gas due to the Marcellus and other shale plays. As a result, the wellhead price of natural gas is expected to be fairly stable through at least the next decade and at lower levels than estimated just last year. Some of the impacts will be felt by natural gas and electric utility customers. The Department of Energy estimates that the price per kilowatt hour of electricity will actually decrease due to the increased supply of natural gas.

According to the study by researchers at Penn State, at full development, the Marcellus will be the second largest natural gas field in the entire world. In terms of production of

natural gas here in the United States, Pennsylvania will be second only to Texas. The study estimated 2010 production at 1 BCFE (billion cubic feet equivalent) per day, and by 2020, that number is estimated at 13.5 BCFE per day. In the coming years this activity will make Pennsylvania a net exporter of natural gas, meaning that the Commonwealth will be natural gas independent.

According to the Pennsylvania Department of Environmental Protection, through December 2010 more than 2300 Marcellus wells have been drilled in Pennsylvania since 2005. According to the study by researchers at Penn State, we can expect to see 3500 wells per year drilled in Pennsylvania by 2020. To put this figure in context we should note that more than 350,000 oil and gas wells have been drilled in Pennsylvania to date.

The responsible development of natural gas from the Marcellus has a tremendous impact on the local and state economies. Each Marcellus well requires an investment of about \$4 million, while each mile of gathering line requires an investment of more than \$1 million. These investments trigger what we have termed the Marcellus Multiplier. This is the stimulation and engagement of many Pennsylvania businesses that all work in concert to develop natural gas and the resulting circulation of dollars in the state and local economies. For every \$1 dollar invested in the Marcellus \$1.90 in economic activity is generated.

You can see the impact of the Marcellus Multiplier every day in many areas of the Commonwealth. Pennsylvania businesses, both large and small - from restaurants, hotels, trucking companies, car washes, mechanics, construction companies, engineering companies – the development of the Marcellus Shale touches just about every segment of Pennsylvania's economy.

The state and local economic impact of the responsible development of natural gas from the Marcellus is of significant proportion. The study previously cited estimates that 2010 jobs created in relation to the Marcellus at nearly 90,000. By 2020, it is estimated that 212,000 jobs associated with the development of the Marcellus will be added to the Pennsylvania economy. Due to the location of the Marcellus, we are seeing significant business activity and employment opportunities in areas of the Commonwealth that have long lagged behind the state's economy. The industry is committed to hiring and training local talent to fill many of these new jobs as possible. Importing skilled workers is a short term solution to our workforce needs. Many of our companies have partnered with education providers to help train a skilled workforce.

The total economic impact of the Marcellus industry measured by value added is estimated at \$8 billion in 2010 and nearly \$19 billion by 2020. This economic impact is having an impact on state and local tax revenues. The study by researchers at Penn State estimates that in 2010 alone the impact of Marcellus activity on state and local tax revenues at nearly \$800 million; by 2020, this increase in local and state tax revenue is estimated at nearly \$1.9 billion dollars. It is important to keep in mind that this revenue impact does not include any windfalls from either the state or local governments leasing any of their land for natural gas production. An example of this can be found in the 2010 Commonwealth leasing of state forest land which resulted in up front bonus payments of approximately \$238 million. Future royalties from production on the land could reach several hundred million dollars per year for the Commonwealth but not the municipalities in which the lands are located.

Apart from all of these energy and economic impacts, Marcellus companies are working to minimize impacts on the communities in which they are operating. One of the greatest examples is the work that is being done to repair and improve roads in rural Pennsylvania. The industry is working cooperatively with both the state Department of Transportation and municipalities to ensure that any and all damage to posted roads caused by our activities is repaired in a timely manner. In some instances this work is not just limited to repair but improving the roads in rural Pennsylvania. We conservatively estimate that Marcellus operators spent more than \$200 million in 2010 to repair and improve roads across the Commonwealth. These are dollars that are not coming out of state or local government coffers.

Some of the transportation impacts of Marcellus activities are traffic related. Constructing a well pad and drilling and completing a well are industrial activities that involve hauling of materials and goods. There is no escaping some of the volume of traffic that comes with Marcellus activities, but many of our members work with local officials to discuss various means to help mitigate the impact of increased traffic on local roads. This past fall, the MSC partnered with the PA State Police, Department of Transportation, Public Utility Commission, and Department of Environmental Protection on a Marcellus Transportation Safety Day seminar to better educate carriers and truck drivers supporting the industry of the Commonwealth's regulations to improve safe operating practices.

We are also working in a cooperative manner with both state and local officials in the area of public safety. Last May, we launched a partnership with the State Fire Academy to expand training for responders, adding new components targeted specifically at shale

gas production. This training covers a host of issues from what to expect upon arriving at a well site to how best to coordinate with on-site industry personnel. This cooperative effort is giving Pennsylvania's first responders the tools needed to respond to the broad range of unlikely scenarios associated with the production of resources from the Marcellus. We understand that 1271 training certificates have been issued to date. A quick scan shows that 17 sessions are being offered across the Commonwealth this month and next alone.

Due to the drilling of multiple wells from one pad and the use of horizontal drilling, our members are lessening surface impacts, and the high percentage of wastewater recycling is making an already low-water use energy source even lower here in Pennsylvania. As previously stated the responsible development of natural gas from the Marcellus is an industrial endeavor. With industrial activities come environmental considerations. Every aspect of our industry is regulated under state and federal environmental rules and regulations. Our activities require various state permits and approvals before any activities take place. Pennsylvania has among the most stringent environmental rules on the books dealing with many aspects of our operations including but not limited to well construction standards, wastewater treatment and disposal requirements, and the regulation of hydraulic fracturing (which was recently independently reviewed and evaluated as well-managed). The members of the MSC are committed to adhering to all applicable environmental laws and regulations in the development of this great resource.

Apart from the impacts of the responsible development of the Marcellus, it is also worthwhile to examine various impacts on our activities. First and foremost, it is important to understand that the Marcellus is one of several producing shale plays in the United States. Other plays in states such as Texas, Arkansas, Oklahoma and Louisiana compete with the Marcellus for the capital needed to develop natural gas from their formations. And, on a global scale, the Marcellus is competing with natural gas fields in other nations for capital.

Capital is finite and we have been fortunate in Pennsylvania that thus far, many companies have invested their capital here to responsibly develop the Marcellus. However, many factors can influence where the capital flows. The business climate and public policy environment influences the investment of capital. To a large extent, state legislative and regulatory policy sets the tone, but here in Pennsylvania local policies from our 2600 municipalities can influence decisions of whether or not to invest in certain areas.

Our hope is that together, we can continue this constructive dialogue on the impacts of Marcellus development, keeping in mind the tremendous benefits that can accrue to the Commonwealth and its citizens and work to fashion a public policy environment that encourages competitive economics while promoting the safe and responsible development of this abundant resource for generations to come.

Thank you.