Department of Legislative Services

Maryland General Assembly
2011 Session

FISCAL AND POLICY NOTE
Revised

House Bill 852 (Delegate Mizeur, *et al.*)
Environmental Matters Education, Health, and Environmental Affairs

The Marcellus Shale Safe Drilling Act of 2011

This bill requires the Maryland Department of the Environment (MDE) and the Department of Natural Resources (DNR) to jointly convene an advisory commission and undertake a study of the extraction of natural gas from shale formations in the State. Except under specified conditions, MDE may not issue a well drilling permit that involves the hydraulic fracturing of a formation until the publication of a final report on the required study, which is due by August 1, 2013. MDE may issue a well drilling permit prior to the issuance of the report if information becomes available during the course of the study sufficient to demonstrate that the extraction of natural gas from shale formations in the State can be accomplished without adverse impact to human health, natural resources, or the environment, and after providing specified notice to the General Assembly. The bill also requires certain persons who acquire a gas interest in real property in Allegany or Garrett counties after January 1, 2007, for the purpose of drilling for natural gas, to file specified information with MDE and pay a fee based on the acreage of the interest acquired. Fee revenue must be deposited into MDE's Oil and Gas Fund and used to pay for the required study; the bill establishes provisions addressing any differences in fee revenue and the cost of the study in order to ensure that the costs of the study are fully offset.

The bill takes effect June 1, 2011.

Fiscal Summary

State Effect: Special fund expenditures increase by about $831,900 in FY 2012 and by about $817,100 in FY 2013 for MDE and DNR to contract with expert consultants and to hire three contractual employees to complete the required study and report, and to account for the fees established by the bill. Special fund revenues for MDE and DNR may increase by roughly $1 million in FY 2012 and 2013 each due to the collection of fees established by the bill. Special fund expenditures may increase by about $351,000 in FY 2014 to reimburse the owners of gas interests that paid fees under the bill, based on the estimated fee revenue and study costs.

(in dollars)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
SF Revenue	$1,000,000	$1,000,000	$0	$0	$0
SF Expenditure	$831,900	$817,100	$351,000	$0	$0
Net Effect	$168,100	$182,900	($351,000)	$0	$0

Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate effect

Local Effect: Local government tax revenues may decrease significantly in Allegany, Garrett, and Washington counties to the extent that the bill's restrictions delay drilling that otherwise would occur. Local expenditures may decrease in future years to the extent that the bill reduces or prevents potentially significant emergency response, environmental remediation, or legal expenses that would not otherwise have been prevented by existing laws, regulations, or contractual protections.

Small Business Effect: Meaningful adverse impact on any small business engaged in gas well drilling and other contractual services associated with the regulated production of natural gas in the Marcellus Shale and potentially on other small businesses that provide services to those entities, to the extent the bill delays drilling that otherwise would occur. Potentially meaningful beneficial impact on engineering, emergency response, geology, hydrology, and environmental services contractors and consultants to the extent the bill's requirements result in additional business opportunities beyond what would otherwise exist under current laws and drilling practices.

Analysis

Bill Summary: The bill requires MDE and DNR to jointly convene an advisory commission that includes representatives of local governments, science and engineering communities, industry groups, environmental organizations, businesses and private citizens who reside in the Western Maryland region, and any other State agencies or other persons the agencies determine necessary.

The bill also requires MDE and DNR to jointly undertake a study of the extraction of natural gas from shale formations in the State, including the Marcellus Shale formation. In designing and undertaking the study, MDE and DNR must consult, as appropriate, other State agencies, other states in the region, and federal agencies. The study must also include a review of the results of a specified U.S. Environmental Protection Agency (EPA) hydraulic fracturing research study, environmental impact statements of the State of New York and the Delaware River Basin Commission, and other available studies of potential impacts to the public health, safety, environment, or natural resources.

The bill requires that the study address the following:

- the risk of contamination of groundwater and surface water by fracturing fluids and gas;
- the risks of contamination of, or negative impacts to, water and other natural resources from the transportation, storage, and handling of liquids, including fracturing fluids;
- the risks of contamination or negative impacts to water and other natural resources from the handling and disposal of flow back and other wastewater and wastes;
- the long-term availability of water resources to support hydraulic fracturing activities;
- increased forest and habitat fragmentation and other environmental impacts due to the construction of drilling platforms, gathering lines, transmission pipelines, and other necessary infrastructure;
- increased risks of traffic accidents and damage to roads and bridges from truck traffic;
- long-term impacts to local land use patterns and the character of rural areas and towns;
- the adequacy of local emergency response capabilities;
- impacts to State resources and recreation lands;
- the projected positive and negative economic impact of hydraulic fracturing activities to the region and the State;
- the desirability of enacting a State-level severance tax to generate revenues for research, remediation, and other activities relating to hydraulic fracturing;
- the establishment of an industry-funded escrow account to fund the cost of remediation and regulatory enforcement;
- the available methods for disposal of flow back and other wastewater and wastes containing radioactive materials;
- well construction standards, including construction methods and materials used; and
- any other issues identified by the advisory commission.

MDE and DNR must make a draft report based on the study publicly available and receive public comments on the report before final publication, which is due August 1, 2013. The final report must include findings, conclusions, and recommendations, if any, for statutory or regulatory changes. MDE is authorized to enter into sole source contracts in order to expedite completion of the study.

The advisory commission must make recommendations to MDE and DNR on conditions that should be included in permits for hydraulic fracturing in the Marcellus Shale and appropriate changes, if any, that should be made to State law and regulations governing hydraulic fracturing in the Marcellus Shale.

MDE may not issue a permit for well drilling that may involve the hydraulic fracturing of a formation before the publication of the final report unless information becomes available during the course of the study sufficient to demonstrate that the extraction of natural gas from shale formations in the State can be accomplished without adverse impact to human health, natural resources, or the environment. If MDE intends to issue a permit prior to the final report being published, the permit may not be issued until at least 45 days after MDE notifies the General Assembly of its intention to issue the permit.

The owner of a gas interest in Allegany or Garrett counties acquired after January 1, 2007, for the purpose of drilling for natural gas must file a notice with MDE by July 1, 2011, or within 30 days after acquiring the gas interest, whichever is later, that identifies each parcel, by number or other legal description, as well as a statement of the total acreage of the parcels and a map of the parcels. An "owner" is defined in current law as the person who has the right to drill into and produce from a pool, or to store in a pool, and appropriate oil or gas the person produces or stores either for the person or others. A "gas interest" is defined for this purpose as the right to explore for gas on, or produce gas from, real property. An "interest" does not include a fee simple interest in the surface rights of real property regardless of whether the fee interest includes the mineral rights.

By August 1, 2011, or within 30 days after notification by MDE, whichever is later, each owner that files a notice with MDE must pay MDE a fee for calendar 2011 of $10 per acre of the total acreage reported. By August 1, 2012, or within 30 days after notification by MDE, whichever is later, each owner that files a notice must pay MDE a fee for calendar 2012 of $10 per acre of the total acreage reported. A fee may not be assessed after calendar 2012. MDE must deposit the money collected under the bill in the Oil and Gas Fund and use it to pay for the study required by the bill.

Following the issuance of the final report required by the bill, MDE must compare the actual costs of the study with the fees paid under the bill. If the actual cost of the study is less than the amount paid, MDE must refund the difference, prorated by acreage, to the owners who paid a fee. If the actual cost of the study is more than the amount paid, each owner that filed a notice must pay, within 90 days after notification, an amount determined by MDE, prorated by acreage, necessary to fully fund the cost of the study.

Failure to file the notice of the acquisition of a gas interest required by the bill, or to pay the fee when due, may be grounds for denial of a permit to explore for or produce gas from formations under the parcel, unless the owner demonstrates good cause for the failure to the satisfaction of MDE. The bill prohibits an owner from passing the payment of required fees through to, or seeking to recover the fees from, the person who owns the surface rights of the property.

Current Law: MDE's Mining Program consists of two units, the Bureau of Mines and the Minerals, Oil, and Gas Division, which regulate coal mining, noncoal mining, and oil and gas exploration and production. A person must obtain a permit from the Minerals, Oil, and Gas Division before drilling a well for the exploration, production, or underground storage of gas or oil in Maryland. A permit is also required for the disposal of any product of a gas or oil well. An applicant who wants to extract gas from the Marcellus Shale may also be required to apply for a number of other State permits, such as a water appropriation permit or a National Pollutant Discharge Elimination System permit.

Chapter 383 of 2010 established an Oil and Gas Fund to support MDE's administration of a regulatory program that oversees the drilling, development, production, and storage of oil and gas wells in the State.

Under Chapter 383 of 2010, MDE is required to set and collect permit and production fees related to oil and gas well drilling. Fees must be set at a rate necessary to (1) review, inspect, and evaluate monitoring data, applications, licenses, permits, and other reports; (2) perform and oversee assessments, investigations, and research; (3) conduct permitting, inspection, and compliance activities; and (4) develop and implement regulations to address the risks to public safety, human health, and the environment from oil and gas well drilling and development. MDE advises that the regulations to establish such fees have been drafted but are being held pending any relevant legislative action.

Among other things, current oil and gas regulations outline application requirements and procedures; criteria for permit approval; drilling and operating requirements and permit conditions; and requirements for the plugging of an oil or gas well upon abandonment or ending of operation. For instance, prior to permit approval, applicants are required to submit a drilling and operating reclamation plan that, among other things, describes how the free liquid fraction and contaminated materials will be disposed of. The drilling and operating requirements and permit conditions outlined in regulations require, among other things (1) drilling liquid to be conditioned and tested daily; (2) authority for MDE to visit and inspect permitted operations; (3) surface casing cement and other casing to meet specified requirements; (4) recordkeeping; and (5) a completed oil and gas well to be equipped with wellhead controls adequate to control the flow and secured to prevent unauthorized access. Upon abandonment or ending of the operation of any gas or oil well, the permittee must plug the hole in accordance with specified requirements.

Current regulations apply to all gas wells in Maryland and are not specific to the practice of hydraulic fracturing, the process used to extract gas from the Marcellus Shale. However, under current law, MDE has broad authority to impose conditions on permits to protect the State's natural resources and to provide for public safety. Thus, under current law, MDE is able to impose special conditions on drilling in the Marcellus Shale if desired. Further, MDE may deny a permit based on a substantial threat to public safety or a risk of significant adverse environmental impact.

Background: The Marcellus Shale formation is a geologic feature in the Appalachian Range which has recently attracted significant attention from the energy industry for its rich natural gas deposits. Geologists have long known about the natural gas resources contained within the formation but had considered the gas to be not economically recoverable until the recent development of new drilling technology reliant on a process called hydraulic fracturing.

The Marcellus Shale underlies New York, Pennsylvania, Ohio, West Virginia, and Western Maryland. Production wells have been drilled in Pennsylvania, New York, Ohio, and West Virginia, and several companies have expressed interest in drilling into the formation in Maryland. In Maryland, the formation is located in Allegany, Garrett, and Washington counties; however, the only anticipated areas of gas production are in Garrett and western Allegany counties. MDE advises that it has received three permit applications for drilling in the Marcellus Shale that are currently active.

In 2010 EPA raised several concerns regarding the impact of hydraulic fracturing on water supplies, water quality, and air quality, among other issues, and is currently examining the practice more closely.

In response to concerns regarding the practice of high-volume, horizontal hydraulic fracturing, in December 2010 New York's Governor issued an executive order imposing a moratorium on the practice until at least July 2011.

State Fiscal Effect: Special fund expenditures increase by $831,893 in fiscal 2012 and by $817,101 in fiscal 2013. MDE and DNR advise that the agencies will require the services of expert hydrologists or hydrogeologists and other academic experts, as well as two staff geologists, to complete the study required by the bill. MDE and DNR will contract with expert consultants to evaluate and analyze all the issues required to be studied under the bill. MDE and DNR will also each hire one additional contractual geologist for a two-year period to oversee the contractors and the additional construction and monitoring activities and to otherwise coordinate the study and completion of the report. An additional contractual budget specialist will also be needed to oversee contracts related to the bill, process invoices, and otherwise account for the fees paid under the bill. The contractual staff will require training and travel, supplies, equipment, communication, and vehicle operation costs in fiscal 2012 and 2013.

	FY 2012	FY 2013
New Contractual Positions	3	0
Salaries and Fringe Benefits	$188,493	$182,618
Contractual Services	620,000	620,000
Start-up Costs and Operating Expenses	23,400	14,483
Total State Expenditures	**$831,893**	**$817,101**

Fiscal 2013 expenditures reflect salaries with 4.4% annual increases, 7.8% employee turnover, and 1% annual increases in ongoing operating expenses. It is assumed that the contracts executed for the services of the expert consultants will be structured to ensure that no general funds or special funds other than what is generated under the bill will be used; this estimate assumes that the total $1.24 million in contractual services costs will be split evenly among fiscal 2012 and 2013. To the extent that the actual contracts require the payment of a significant portion of the total estimated costs in fiscal 2012, it is possible that general funds or other special funds may be necessary temporarily until sufficient fee revenue is available to cover these costs.

Although the required report is not due until August 1, 2013, this estimate assumes that each contractor and contractual employee is retained only through June 30, 2013. To the extent that existing MDE and DNR employees cannot complete the report after June 30, 2013, without additional assistance, special fund expenditures may increase in fiscal 2014 to retain additional contractual assistance until the completion of the required report.

MDE estimates that the fee of $10 per acre of land established by the bill will generate approximately $1.0 million annually in special fund revenues for the Oil and Gas Fund in fiscal 2012 and 2013 each. Legislative Services advises that this may be based on a conservative estimate of the number of acres acquired for the purpose of drilling for natural gas in Allegany and Garrett counties and may therefore understate the actual fee revenues generated for the Oil and Gas Fund under the bill. While Garrett County has not released a final estimate of the number of acres attributed to interests in natural gas rights, a preliminary review of records collected by the county land records office shows more than 150,000 acres have been sold or leased since July 1, 2007, primarily to natural gas exploration or development companies. However, this estimate may not include all interests acquired, as some interests may not have been recorded, and the acquisition date of other interests cannot be determined. Nevertheless, 150,000 acres may be a reasonable estimate of the number of acres attributable to acquisitions of natural gas interests in Garrett County. Similar data are not available for Allegany County; however, based on information from Allegany and Garrett counties and the University of Maryland Extension, it is likely that there are far fewer acres of natural gas interests in Allegany County.

Although the total extent of natural gas interests acquired in Allegany and Garrett counties since January 1, 2007, may be nearly 200,000 acres by August 1, 2011, the $1.0 million estimate of annual revenue provided by MDE may nevertheless represent a reasonable estimate to the extent that some owners do not pay the fee as required. The bill establishes a significant incentive to pay the fee by authorizing MDE to deny or withhold a permit to explore for or produce gas to an owner that does not file its interest with MDE and pay the required fee. However, some companies may opt to sell previously acquired gas interests or pursue legal action rather than pay the fees established by the bill and incur additional expense associated with the potentially significant delay in natural gas exploration or production resulting from the bill.

If the bill generates special fund revenues of $1 million annually in fiscal 2012 and 2013, then, as shown in **Exhibit 1**, revenues will exceed expenditures in fiscal 2012 and 2013, resulting in an estimated $351,006 balance of unexpended fee revenue after the two-year period. If the actual cost of the study is less than the fees paid, the bill requires MDE to refund the difference, prorated by acreage, to the owners who paid a fee. Thus, this estimate assumes MDE refunds approximately $351,006 to owners in fiscal 2014.

Exhibit 1
Oil and Gas Fund Revenues and MDE/DNR Expenditures

	FY 2012	FY 2013	FY 2012-2013 Total
Estimated Fee Revenue	$1,000,000	$1,000,000	$2,000,000
MDE and DNR Expenditures	831,893	817,101	$1,648,994
Balance	**$168,107**	**$182,899**	**$351,006**

Source: Department of Legislative Services

To the extent actual fee revenue or the cost of the study varies from these estimates, the amount of any reimbursement will vary accordingly. Also, to the extent the cost of the study exceeds fee revenue, special fund revenues increase in fiscal 2014 in an amount sufficient to cover remaining costs as required by the bill.

Finally, Oil and Gas Fund finances could be further affected to the extent the bill results in a delay in the issuance of any permits and the receipt of related permit fees than otherwise would occur under current law.

Additional Information

Prior Introductions: None.

Cross File: SB 634 (Senator Frosh) - Education, Health, and Environmental Affairs.

Information Source(s): Allegany and Garrett counties; Maryland Department of the Environment, Department of Health and Mental Hygiene, Maryland Department of Transportation, University of Maryland Extension, U.S. Environmental Protection Agency, Department of Legislative Services

Fiscal Note History: First Reader - February 22, 2011
ncs/lgc Revised - Clarification - February 24, 2011
Revised - House Third Reader - April 5, 2011

Analysis by: Evan M. Isaacson

Direct Inquiries to:
(410) 946-5510
(301) 970-5510