

**Department of Legislative Services**  
Maryland General Assembly  
2017 Session

**FISCAL AND POLICY NOTE**  
**First Reader**

Senate Bill 980 (Senator Edwards)  
Education, Health, and Environmental Affairs

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**Environment - Natural Gas and Oil Interest Restitution Fund**

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This bill creates the Natural Gas and Oil Interest Restitution Fund administered by the Maryland Department of the Environment (MDE). The purpose of the fund is to compensate an owner of a natural gas or oil interest in at least 50 acres of contiguous land in the State for financial losses due to an inability to lease or sell a natural gas or oil interest to a third party (for the purpose of hydraulic fracturing) if the losses are caused by a statewide prohibition on hydraulic fracturing or a prohibition or delay on issuing a permit for hydraulic fracturing. The primary source of revenue for the fund comes from owners of facilities (or systems) that begin generating electricity that is eligible for inclusion in meeting the Maryland Renewable Energy Portfolio Standard (RPS) beginning January 1, 2017. These entities must deposit 25% of the revenues from the sale of their renewable energy credits (RECs) in the State to satisfy the RPS into the fund.

The bill takes effect June 1, 2017, but is contingent upon the enactment of a statewide prohibition on hydraulic fracturing or a prohibition or delay on issuing a permit for hydraulic fracturing.

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**Fiscal Summary**

**State Effect:** Special fund revenues to and expenditures from the new fund increase significantly in any year that a statewide ban on hydraulic fracturing or a delay on issuing a permit for hydraulic fracturing takes effect. In that year, general fund expenditures increase for MDE to hire contractual staff to administer the fund.

**Local Effect:** The bill does not materially affect local government operations or finances.

**Small Business Effect:** Potential meaningful.

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## Analysis

**Bill Summary:** In addition to revenue distributed from renewable energy facility/system owners, the fund consists of money appropriated in the State budget to the fund and any other money from any other source accepted for the benefit of the fund. Any interest earnings of the fund accrue to the fund.

To receive compensation from the fund, an owner must demonstrate that the lease or sale of the owner's natural gas or oil interest to a third party was terminated due to a statewide prohibition on hydraulic fracturing or a prohibition or delay on issuing a permit for hydraulic fracturing. The fund may not be used to compensate an owner for money lost from a prohibition on hydraulic fracturing by the local jurisdiction in which the natural gas or oil interest is held.

MDE must notify the Department of Legislative Services (DLS) within five days of the enactment of a statewide prohibition on hydraulic fracturing or a prohibition or delay on issuing a permit for hydraulic fracturing. If DLS does not receive such a notice by June 1, 2027, the bill terminates.

### **Current Law/Background:**

#### *Maryland's Renewable Energy Portfolio Standard – Generally*

Maryland's RPS was enacted in 2004 to facilitate a gradual transition to renewable sources of energy. It operates on a two-tiered system with carve-outs for solar energy and offshore wind energy and corresponding RECs for each tier. Electric companies (utilities) and other electricity suppliers must submit RECs equal to a percentage specified in statute each year or else pay an alternative compliance payment (ACP) equivalent to their shortfall. Over the past few years, the requirements have been met almost entirely through RECs, with negligible reliance on ACPs. The Maryland Energy Administration must use ACPs to support new renewable energy sources.

Chapters 1 and 2 of 2017 increased the Tier 1 percentage requirements from 20% by 2022 to 25% by 2020. The solar carve-out, which is included in Tier 1, was likewise increased from 2.0% by 2022 to 2.5% by 2020. The Tier 2 requirement remains constant at 2.5% each year until ending after 2018. In 2017, the requirements are 13.1% for Tier 1 renewable sources, including at least 1.15% from solar energy, and 2.5% from Tier 2 renewable sources. **Exhibit 1** shows the required percentage and the estimated retail sales of energy in megawatt-hours (MWh) for compliance years 2018 through 2022.

Tier 1 sources include wind (onshore and offshore); qualifying biomass; methane from anaerobic decomposition of organic materials in a landfill or wastewater treatment plant;

geothermal; ocean, including energy from waves, tides, currents, and thermal differences; a fuel cell that produces electricity from specified Tier 1 renewable sources; a small hydroelectric plant of less than 30 megawatts; poultry litter-to-energy; waste-to-energy; refuse-derived fuel; and thermal energy from a thermal biomass system. Tier 1 solar sources include photovoltaic cells and residential solar water-heating systems commissioned in fiscal 2012 or later. Following the transfer of several sources to Tier 1, Tier 2 includes only large hydroelectric power plants.

**Exhibit 1**  
**Annual RPS Specifications – Tier 1**

**Percentage of Retail Sales that Must Come from RECs**

<u>Compliance Year</u>	<u>Total</u>	<u>Retail Sales of Energy (MWh)</u>
2017	13.1%	62,886,600
2018	15.8%	63,432,460
2019	20.4%	63,747,040
2020	25.0%	64,001,840
2021	25.0%	64,285,060

RPS: Renewable Energy Portfolio Standard  
 REC: Renewable Energy Credit  
 MWh: megawatt-hour

Source: Department of Legislative Services

*Definition of Hydraulic Fracturing*

Under the Environment Article, “hydraulic fracturing” means a technique that expands existing fractures or creates new fractures in rock by injecting fluids, often a mixture of water and chemicals, sand, or other substances, and often under pressure, into or underneath the surface of the rock for purposes that include well drilling for the exploration or production of natural gas. “Hydraulic fracturing” includes fracking, hydrofracking, and hydrofracturing.

*Permits Required*

A person must obtain a permit from MDE 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 that wants to extract gas from the Marcellus Shale may also be required to apply for a number of other State

environmental permits. MDE regulates gas exploration and production and has broad authority to impose conditions on permits to protect the State's natural resources and to provide for public safety. Further, MDE may deny a permit based on a substantial threat to public safety or a risk of significant adverse environmental impact.

### *Maryland Department of the Environment Regulations Related to Hydraulic Fracturing*

Current oil and gas exploration regulations were adopted before techniques like hydraulic fracturing and horizontal drilling were widely used in this region and have not been revised since 1993. These regulations apply to all oil and gas wells in Maryland, are not specific to the practice of hydraulic fracturing and, in some cases, are incompatible with modern industry practices. Applications for permits to produce natural gas in Maryland using horizontal drilling and high-volume hydraulic fracturing were first filed with MDE in 2010 but were subsequently withdrawn.

MDE published regulations in the *Maryland Register* on January 9, 2015, to implement many of the best practices identified in the final report of the Marcellus Shale Safe Drilling Initiative Advisory Commission, but the regulations were subsequently withdrawn. Chapters 480 and 481 of 2015 required MDE to adopt regulations to provide for the hydraulic fracturing of a well for the exploration or production of natural gas by October 1, 2016; the Acts also prohibited the regulations from taking effect until October 1, 2017, and prohibited MDE from issuing a permit to drill a well using hydraulic fracturing until October 1, 2017. MDE published another set of oil and gas exploration and production regulations in the November 14, 2016 edition of the *Maryland Register*. In late December 2016, the Joint Committee on Administrative, Executive, and Legislative Review placed a hold on the regulations to allow the committee to conduct a more detailed study of the regulations.

More information on the practice of hydraulic fracturing in Maryland, including environmental and public health concerns, recent State and local legislation, and the Marcellus Shale Safe Drilling Initiative, may be found in the **Appendix – High-volume Hydraulic Fracturing in Maryland**.

**State Revenues:** Special fund revenues to and expenditures from the new fund increase significantly in any year that a statewide hydraulic fracturing ban or a prohibition or delay on issuing hydraulic fracturing permits takes effect and results in financial losses to owners of natural gas or oil interests, as specified by the bill. Since no such ban or delay currently exists, DLS is unable to predict the amount and/or timing of any such increase. However, when a triggering ban or delay on issuing permits occurs, the owner of an RPS-eligible facility that begins generating electricity on or after January 1, 2017, must deposit 25% of the revenue from the sale of RECs in the State to the fund. This requirement exists for both in-State and out-of-State facilities that sell RECs in the State. *For illustrative purposes*

*only*, if a qualifying ban or delay on issuing permits took effect on June 1, 2017, when the bill takes effect, special fund revenues for the Natural Gas and Oil Interest Restitution Fund increase by \$168,611 in fiscal 2017, by \$7.6 million in fiscal 2018, by \$22.5 million in fiscal 2019, by \$41.2 million in fiscal 2020, and by \$50.8 million in fiscal 2021. These estimates are based on the estimated retail sales of energy and the total RECs needed in the State. The estimates also assume that incremental RECs that are used for compliance beyond fiscal 2016 are from new energy facilities and that REC prices average \$25. It is unclear what happens if there is a fund balance after all claims have been paid, or if electricity generating facilities are relieved of the requirement to continue paying into the fund after affected owners are compensated.

Special fund expenditures from the fund also increase, likely significantly, to provide restitution to affected, qualifying owners. However, DLS does not have a specific estimate of the magnitude of the increase in special fund expenditures to compensate an owner for money lost due to an inability to lease or sell a natural gas or oil interest for the purpose of hydraulic fracturing.

The fund is not authorized to be used for MDE's administrative expenditures. Therefore, general fund expenditures for MDE increase in the year that a statewide hydraulic fracturing ban or a prohibition or delay on issuing hydraulic fracturing permits takes effect to hire a contractual agency grants specialist to administer the fund, including reviewing documentation submitted by owners, determining compensation amounts, and distributing funds. General fund expenditures continue for as long as it takes MDE to administer the fund and pay restitution to all affected, qualifying owners. It is assumed that a contractual employee is sufficient because there are a finite number of owners of gas and oil interests on at least 50 contiguous acres in areas where hydraulic fracturing is feasible. Thus, a regular, full-time employee is not required.

**Small Business Effect:** The bill may result in a significant increase in revenues to the extent that a small business is considered an owner under the bill and receives restitution funds in any year that a statewide hydraulic fracturing ban or a delay on issuing a permit for hydraulic fracturing takes effect. The magnitude of any such increase is difficult to quantify for several reasons, including the fact that the number and value of qualifying natural gas and oil interests is unknown and the bill does not address (1) how to determine the value of money lost or (2) how to distribute restitution if funds are insufficient to fully compensate every owner. However, given the potential funds available for restitution under the bill, it is reasonable to assume that any compensation provided may be significant.

## Additional Information

**Prior Introductions:** None.

**Cross File:** Although HB 1461 (Delegate Beitzel, *et al.* - Environment and Transportation and Economic Matters) – is designated as a cross file, it is not identical.

**Information Source(s):** Maryland Department of the Environment; Maryland Energy Administration; Public Service Commission; Department of Legislative Services

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## Appendix – High-volume Hydraulic Fracturing in Maryland

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The Marcellus Shale formation is a geologic feature found throughout the northern Appalachian basin that has attracted significant attention from the energy industry for its rich natural gas and liquids resources contained within seven states. In Maryland, the primary anticipated areas of potential gas production from the Marcellus Shale formation are in Garrett and western Allegany counties. However, according to the U.S. Geological Survey (USGS), there may be additional natural gas resources located in several other counties in the State, including in the Taylorsville basin, the Delmarva basins, the Culpeper basin, and the Gettysburg basin. A map of these basins is available in a June 2012 [fact sheet](#) published by USGS.

### *Concerns Regarding High-volume Hydraulic Fracturing*

As the use of hydraulic fracturing has increased, so has concern about its potential impacts. The Maryland Department of the Environment (MDE) has advised that, although accidents are relatively rare, exploration for and production of natural gas in nearby states have resulted in injuries, well blowouts, releases of fracturing fluids, releases of methane, spills, fires, forest fragmentation, road damage, and evidence of water contamination.

In 2010, the U.S. Environmental Protection Agency (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 April 2012, EPA adopted a final rule to address air emissions from hydraulic fracturing. In December 2016, EPA released a final [report](#) entitled *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States*. In the report, EPA states that it found scientific evidence that hydraulic fracturing activities can impact drinking water resources under some circumstances. The report also identifies certain conditions under which impacts from hydraulic fracturing can be more frequent or severe.

EPA also has a series of peer-reviewed studies of various aspects of hydraulic fracturing publicly available on the agency's website. Other states, academic and environmental organizations, and the oil and gas industry are also conducting research into the impacts of hydraulic fracturing on public health, safety, and the environment. On December 17, 2014, Governor Andrew M. Cuomo of New York prohibited the practice of high-volume hydraulic fracturing in New York State following the release of a multi-year study conducted by the New York State Department of Health that recommended a ban until sufficient information on the risks of the practice became available.

### *State Legislation Related to Hydraulic Fracturing*

Chapters 480 and 481 of 2015 required MDE to update regulations for well drilling permits and established a moratorium on issuing permits for hydraulic fracturing until October 1, 2017. Chapter 568 of 2013 established specified financial assurance requirements for a well permit holder and requires a permit holder to have specified comprehensive general and environmental pollution liability insurance coverage. Chapter 703 of 2012 established a presumptive impact area applicable to areas around a deep shale gas deposit well for which MDE has issued a gas exploration or production permit. In a presumptive impact area, it is presumed that contamination of a water supply was caused by the activities of gas exploration or production.

### *Local Action Related to Hydraulic Fracturing*

Locally, due to concerns regarding air and water pollution and the impact that hydraulic fracturing may have on the region's tourism and outdoor recreation industries, two Garrett County municipalities, the Town of Mountain Lake Park (in April 2011) and the Town of Friendsville (in July 2016), adopted ordinances that effectively ban hydraulic fracturing within their borders. Additionally, in April 2016, the Prince George's County Council altered the county's zoning laws to prohibit hydraulic fracturing and related activities in the county. Although the Marcellus Shale formation is not located in Prince George's County, according to USGS, an area in the southern part of the county may be an untapped natural gas reserve.

### *Marcellus Shale Safe Drilling Initiative*

In 2011, Executive Order 01.01.2011.11 established the Marcellus Shale Safe Drilling Initiative. The executive order directed MDE and the Department of Natural Resources (DNR) to assemble and consult with an advisory commission to assist policymakers and regulators in determining whether and how gas production from the Marcellus Shale in Maryland can be accomplished without unacceptable risks of adverse impacts to public health, safety, the environment, and natural resources. Specifically, the executive order tasked MDE and DNR, in consultation with the advisory commission, with conducting a three-part study and reporting recommendations. The advisory commission terminated on May 1, 2015, after publication of its final report, *Assessment of Risks from Unconventional Gas Well Development in the Marcellus Shale of Western Maryland*. The [final report](#), which was published in December 2014, recommended best practices and concluded that, with implementation, monitoring, and enforcement of those best practices, "the risks of Marcellus Shale development can be managed to an acceptable level." The best practices identified in the report have informed MDE's recent regulatory proposals.