

2014-16 Executive Progress Report

Commonwealth of Virginia
Secretary of Commerce and Trade

Department of Mines, Minerals and Energy

At A Glance

It is the mission of the Department of Mines, Minerals and Energy (DMME) to enhance the development and conservation of energy and mineral resources in a safe and environmentally sound manner to support a more productive economy.

Staffing 204 Salaried Employees, 11 Contracted Employees, 233 Authorized, and 2 Wage Employees.

Financials Budget FY 2015, \$35.86 million, 37.35% from the General Fund.

Trends	↓ Coal production	Key Perf Areas	↑ Injury rate on permitted sites
	→ Natural gas production		→ % of sites with no damage
	↑ Number of alt. fuel vehicles		↑ % of miners rating training effective
Legend	↑ Increase, ↓ Decrease, → Steady	Productivity Legend	↑ Improving, ↓ Worsening, → Maintaining

For more information on administrative key, and productivity measures, go to www.vaperforms.virginia.gov

Background and History

Agency Background Statement

The Department of Mines, Minerals and Energy (DMME) supports the safe and environmentally sound development of Virginia's energy and mineral resources to promote economic growth. DMME provides for worker safety on coal and mineral mine sites throughout the Commonwealth. DMME also assists with worker safety on gas and oil extraction sites. DMME investigates complaints from citizens living near mining or gas and oil extraction sites, works to eliminate off-site environmental damages and ensures proper reclamation of land used for mineral extraction.

Serving as Virginia's geologic survey, DMME develops and provides information about Virginia's diverse geology, natural hazards and mineral and energy resources. Housing the state's energy office, DMME advances energy efficiency in state government and the private sector. DMME staffs the Virginia Offshore Wind Development Authority and administers grant and revolving loan programs to facilitate the growth of the renewable energy industry. Additionally, DMME works with stakeholders to promote economic development in the natural resource and energy sectors.

Mineral resources have played a significant role in Virginia's growth and development since the settlement of Jamestown when English colonists began mining and smelting iron in 1609. The first commercial coal mining in the United States occurred near Richmond in 1748. Thomas Jefferson, in his essay "Notes on the State of Virginia," mentioned the discovery of gold, coal, lead, copper, iron, graphite, marble, limestone and other minerals.

Today, over 400 different minerals have been found and more than 30 different mineral resources are produced in Virginia at a combined annual value of nearly \$2 billion. In 2013, Virginia ranked 8th in the production of crushed stone and has experienced a dramatic increase in the production of natural gas, driven by the development of coalbed methane reserves. As of 2012, Virginia ranked 14th in coal production, and it is expected that production will continue to decrease in the coming years.

Major Products and Services

DMME offers a wide variety of products and services to its diverse customer base, which includes the following:

Permitting of mineral extraction sites:

DMME's permitting review services ensure mineral extraction operations are safe, protect of the environment, and comply with existing laws and regulations.

Economic development:

DMME offers incentives and grant programs for energy industry development to increase jobs and economic activity in Virginia.

DMME provides mineral resource information to businesses seeking to develop deposits such as precious metals, rare earth elements, industrial minerals and aggregate.

Customer assistance:

DMME provides worker certification and training, technical assistance, risk assessment, hazard identification, and cooperative projects, such as mine safety, environmental protection and land reclamation during mineral extraction.

DMME's customer assistance services help customers maintain safe and environmentally protective mineral extraction sites in compliance with regulatory requirements.

DMME's geologic and mineral resource information is available to effectively manage development of natural resources, such as coal, natural gas, crushed stone and industrial minerals, and geothermal energy.

Inspection and enforcement:

DMME conducts thorough and consistent inspection of permitted sites and enforces laws and regulations addressing worker safety on mineral extraction sites, operational and reclamation environmental controls, and water quality to ensure compliance.

Land reclamation:

DMME conducts reclamation of abandoned mineral extraction sites, corrects damage and mitigates risks of future damage from improperly reclaimed sites while supporting economic development.

Hazard mitigation:

DMME works with industry, state and federal agencies and local governments to respond to and mitigate natural and manmade hazards related to mining, drilling, earthquakes and landslides.

Energy planning:

The Code of Virginia directs DMME to prepare a comprehensive Virginia Energy Plan (VEP) covering a 10 year period. The VEP proposes actions consistent with the energy objectives and the Commonwealth Energy Policy enumerated in the Code and is updated shortly after each Governor takes office. The VEP was most recently updated on October 1, 2014. An interim update is required in October 2016.

Customers**Customer Summary**

Coal production is expected to continue to decrease during this biennium due to market forces and increased federal regulatory requirements. Coal mines in Southwest Virginia have recently been idled and closed which will have a negative impact on the economy in that region of the Commonwealth.

Natural gas production should remain relatively stable or increase slightly. The use of technologies such as horizontal drilling and hydraulic fracturing have produced record amounts of gas and many utilities are converting coal fired power plants to natural gas. Future technological advances as well as the discovery of new shale gas deposits could result in long term natural gas industry growth and expansion into new areas of the Commonwealth.

With respect to mineral mining, demand for minerals and construction aggregate will grow as the economy continues to recover. The Commonwealth's increased emphasis on funding new transportation projects may also help fuel the mineral mining industry's growth as it would increase the demand for gravel and other minerals.

Increasing global demand is driving up the prices of precious metals and energy-critical minerals such as lithium, cobalt, and rare earth elements. DMME offers readily available information about the occurrence of these resources in Virginia which could facilitate the growth of new industries in the Commonwealth.

DMME expects to see the number of government entities participating in demand response or energy performance contracting programs to increase. These programs offer participants incentives to curtail energy usage or install more energy efficient systems paid for by the savings those systems generate.

Customer Table

Predefined Group	User Defined Group	Number Served Annually	Potential Number of Annual Customers	Projected Customer Trend
Employer/ Business Owner	Mineral extraction operators	350	350	Stable
Employee	Mineral extraction workers	9,000	9,000	Stable
Employer/ Business Owner	Affiliated mineral extraction business interests	2,800	2,800	Stable
Federal Agency	Other governmental agencies	10	10	Stable

State Agency(s),	Other governmental agencies	20	20	Stable
Local or Regional Government Authorities	Other governmental agencies	60	60	Stable
Resident	Public affected by mineral extraction operations	1,600,000	2,000,000	Stable

Finance and Performance Management

Finance

Financial Summary

DMME's funding derives from federal funds (40.25%), general fund appropriation (37.35%), permit and license fees paid by mineral extraction operators (9.11%), bond forfeiture proceeds (6.04%), indirect cost recovery revenue (3.60%), and miscellaneous sources such as state designated mine rescue team dues, civil penalty payments, and orphaned mineral mine or well reclamation or plugging revenues (3.65%) for FY 2015.

DMME's funding derives from federal funds (42.01%), general fund appropriation (34.51%), permit and license fees paid by mineral extraction operators (9.60%), bond forfeiture proceeds (6.30%), indirect cost recovery revenue (3.76%), and miscellaneous sources such as state designated mine rescue team dues, civil penalty payments, and orphaned mineral mine or well reclamation or plugging revenues (3.82%) for FY 2016.

Fund Sources

Fund Code	Fund Name	FY 2015	FY 2016
0100	General Fund	\$13,396,778	\$11,857,759
0200	Special	\$162,978	\$162,978
0214	Forfeited Bond Funds	\$2,165,000	\$2,165,000
0218	Permit Fees Fund	\$3,268,491	\$3,298,223
0247	Mine Rescue Fund	\$155,000	\$155,000
0280	Appropriated Indirect Cost Recoveries	\$1,292,413	\$1,293,308
0726	Abandoned Mined Land Special Trust Fund	\$525,000	\$525,000
0950	Minerals Other Than Coal Abandon Lands Reclamation	\$120,000	\$120,000
0952	Orphaned Well Fund	\$53,000	\$53,000
0960	Coal Pool Bond Administration Fund	\$41,700	\$41,700
0963	Conservation & Recreation	\$250,000	\$250,000
1000	Federal Trust	\$14,433,573	\$14,433,573

Revenue Summary

DMME's reported revenues from FY 14 were derived from ARRA related grants/Loan funds (7%), other federal grants (76%), indirect cost recoveries (4%), license and permit fees (9%), and other miscellaneous sources, such as civil penalty payments and orphaned mineral mine or well reclamation funds (4%).

Performance

Performance Highlights

DMME continues to meet or exceed targets in its department-wide measures. Agency metrics for safety, environmental protection, and worker training all reflect high quality performance.

Adjusting to ongoing staff and budget reductions, relevant performance measures continue to reflect DMME's emphasis on efficient, effective core services and continuous quality improvement. Injury rates are trending downward, permits continue to be processed in a timely fashion, and customers consistently rate training provided by DMME as excellent. Productivity and efficiency gains enhance service delivery, and support adjustments in staff and resources.

Selected Measures

Measure ID	Measure	Alternative Name	Estimated Trend
40900000.001.003	Average annual cost of keeping one mineral extraction worker safe.	Avg. safety cost for 1 worker	Maintaining
40900000.001.001	Number of serious injuries and fatalities at mineral and fossil fuel extraction sites per 200,000 worker hours.	Injury rate on permitted sites	Improving
40900000.002.001	Percentage of permitted mineral and fossil fuel extraction sites with no adverse off-site environmental damage or public safety hazards.	% of sites with no damage	Maintaining
409.0002	Percentage of miners rating safety training provided by the Department of Mines, Minerals and Energy as very effective.	% of miners rating training effective	Improving
409.0001	Cumulative net present value of energy conservation savings to the Commonwealth from the energy performance contracting program.		Maintaining

Key Risk Factors

DMME Workforce

Reflecting the overall aging of America's workforce, DMME is facing the need to replace a significant proportion of its workforce in the next five years. A number of employees have left the agency in recent years and more will be eligible for retirement in the coming biennium. Specifically, 47 employees (20%) are eligible to retire with more than 30 years of service (six employees have 40 or more years of service). In the next five years, 23 (12%) will be eligible. This change in workforce results in the loss of a tremendous amount of the institutional knowledge that helps DMME understand and address the challenges of providing high quality customer service in the worker safety, environmental protection, geology, and energy conservation arenas. Recruitment and retention are made more difficult as regulated industries continue to offer high wages and other incentives to deal with similar labor shortages. DMME has proactively updated its transition plans and task descriptions across the agency to prepare for these changes.

The Future of Coal

Given the increased pressures from cheaper fuels such as natural gas, uncertain global economic trends and increased federal regulatory requirements, the future of coal is an uncertain one. Mines have been idled or closed. If these trends continue, the economy in Southwest Virginia would be tremendously impacted, with ripple effects felt throughout the Commonwealth.

The Growth of Alternative Energy

Virginia was the second east coast state selected for a commercial lease sale of submerged federal lands on the Outer Continental Shelf for the development of wind energy resources. The September 2013 auction was a significant milestone achieved because of research, planning and collaboration with multiple stakeholders and users of ocean space and ocean resources. DMME provides staff support to the Virginia Offshore Wind Development Authority and is the pending holder of two offshore research leases from the U.S. Department of Interior's Bureau of Ocean Energy Management. DMME is also involved in other emerging energy technologies. The agency is working with the Department of General Services to facilitate the conversion of the state vehicle fleet to alternative fuels and with the Department of Environmental Quality to advance the use and development of solar and wind energy resources.

Agency Statistics

Statistics Summary

These statistics reflect the breadth of DMME's responsibilities with respect to inspection of permitted sites. They also reflect the number of facilities enrolled in energy demand response programs and the wide variety of geologic and mineral resource material available. All statistics are current as of June 30, 2014.

Statistics Table

Description	Value
Number of permitted coal mine sites	267
Number of permitted mineral mine sites	431
Number of permitted gas and oil sites	10,803
Number of coal mine safety inspection hours for fiscal year 2014	21,198
Number of state and local government facilities enrolled in energy demand response programs	71
Number of geologic and mineral resource publications available on DMME's website	1,538

Management Discussion

General Information About Ongoing Status of Agency

DMME continues to focus on its core services in order to fulfill its mission to enhance the development and conservation of energy and mineral resources in a safe and environmentally sound manner in order to support a more productive economy. DMME utilizes its robust strategic planning process, long an agency strength, to identify efficiencies, generate new opportunities and prepare for the future in challenging economic times.

As a matter of course, DMME identifies existing processes that can be improved, thus providing increased benefits to its customers.

In fiscal year 2015 and beyond, DMME anticipates coal mining and natural gas drilling to continue to occur in close proximity in Southwest Virginia. DMME's regulatory divisions will continue to work closely together to ensure both activities are conducted in a safe and environmentally responsible fashion.

During fiscal year 2015, DMME will undertake important projects related to offshore energy and research. The agency will assess offshore sand resources to assist in coastal recovery and resiliency. Also, DMME will complete a study on also continue its important work to address geologic hazards such as earthquakes and landslides. The agency has also recently initiated projects to assist coastal recovery and resiliency and to assess the Commonwealth's readiness for offshore drilling.

With respect to energy, DMME delivered an updated Virginia Energy Plan to the Governor and General Assembly on October 1, 2014 and will work to implement its recommendations. DMME will play an important role in the growth of the renewable energy industry by providing staff support to the Virginia Offshore Wind Development Authority. DMME will also continue to manage the Virginia Energy Management Program (VEMP), providing participating government entities with the tools to conserve and reduce energy usage and provide cost certainty via long term bulk fuel purchase contracts. Additionally, DMME is taking the lead among southeastern states in developing a publicly accessible database of the region's geothermal energy resources. Finally, DMME will partner with the Department of General Services to convert the state vehicle fleet to alternative fuels.

DMME will continue to search for more innovative and efficient methods to provide training and certification services to its customers. Technological advancements will be utilized across the agency. Geographic information systems and global positioning satellite systems will be utilized to ensure pinpoint accuracy of mineral data on permits, maps and mineral resource information.

Information Technology

DMME users and hardware follow existing Virginia Information Technologies Agency/Northrop Grumman (VITA/NG) standards. IT related service and operation costs for the agency continue to be one of the highest concerns due to the implementation of VITA/NG chargeback models. DMME's repeated attempts to reduce costs have not resulted in significant savings to the agency due to numerous additional charges and rate increases.

DMME has developed custom software and extensive business applications for its office and field staff. This software has provided advanced capabilities in the areas of mapping, enforcement tools and web services. DMME has implemented web-based e-government services for a majority of our industry customers. These innovative changes have had a positive impact on agency service delivery and customer satisfaction as well as being nationally recognized.

Increasing IT costs have presented challenges for DMME to continue to develop new and innovative services. Customers continue to express a high demand for electronic government services and information. Current staff efforts are further challenged by the continuous struggle to reduce cost while maintaining effective computer system software that meets customer needs. Hardware and operating system upgrades have required the vast majority of the custom DMME software to be rewritten. These upgrades have been in response to NG/VITA system requirements, not a requirement of clients or business needs. The increased need for system testing and upgrades has reduced development time for needed business solutions.

DMME plans to use current staff to interface or reengineer the processes in support of the new state system requirements. Years of software development is being re-engineered to work within a less costly environment while maintaining the high standards of service for which DMME is well known. To continue to meet these standards, DMME's eForm center applications (government-to-business) will be expanded during the coming biennium to provide additional services to our industry customers.

The award-winning DMME electronic permitting system in the Coal Environmental Protection and Land Reclamation service area will be expanded to provide additional functionality to industry with the addition of web-based applications in the eForms Center. A number of mapping web services are already in place and additional ones will be made available to support the wide variety of needs of DMME's mapping customers. A cloud storage service will soon host a mine mapping catalog which will feature thousands of mine maps. The maps will serve as an expanding resource for industry customers in meeting safety and reclamation requirements.

Workforce Development

DMME currently has 233 FTE (full-time equivalent) positions, with 204 filled. DMME's FTE number has ranged from a high of 298 to today's low of 233.

As detailed earlier in this report, DMME is facing the need to replace a significant proportion of its workforce in the next five years. 47 employees (20%) are eligible to retire with more than 30 years of service. In the next five years, 23 (12%) will be eligible. This change in workforce results in

the loss of a tremendous amount of institutional knowledge. DMME has proactively updated its transition plans across the agency to prepare for these changes.

Physical Plant

DMME maintains four offices across Virginia, one of which it owns (Big Stone Gap) and three that are leased (Richmond, Charlottesville and Lebanon). The largest of these facilities is the Buchanan-Smith Building in Big Stone Gap. This facility includes 44,000 square feet of office space and the agency's garage that maintains most of the agency's 135 vehicles. The facility was completed and occupied in 1992 and has maintenance needs typical of a twenty year old building. The roof and a portion of the HVAC system will soon need to be replaced.

The Buchanan-Smith Building features office space for 100 staff members, two active file areas and a customer assistance center. Storage space in the building is at a premium. Efforts to store files electronically are ongoing.

DMME's Richmond office is located in the Washington Building on Capitol Square and houses 20 staff members. DMME has leased this space from the Department of General Services since 2009.

DMME's offices in Charlottesville are located in the Department of Forestry's building in the Fontaine Research Park. DMME moved into this building in 1994. In an agreement established prior to construction, DMME does not pay rent for this space. The facility features office space for 32 staff members, a research laboratory, a large library, and a customer assistance area.

In 2009, DMME entered into a 20 year lease with the Russell County Industrial Development Authority (RCIDA) for office space located in the Russell County Government Center in Lebanon. This facility features office space for 20 staff members, 24 workstations shared among 40 field inspectors, and a customer assistance area. DMME has been working with RCIDA to enhance security at the facility. Storage issues are being addressed at this facility as well. The recent boom in natural gas drilling has created a need to store hundreds of thousands of pages of data. Efforts to store this legally required data electronically are ongoing.
