

NETL's mission is to implement a research, development, and demonstration program to resolve the environmental, supply, and reliability constraints of producing and using fossil resources.



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National, State, and Regional Economic and Environmental Impacts of NETL: West Virginia

Throughout West Virginia and the Nation, the U.S. Department of Energy's National Energy Technology Laboratory (NETL) provides support for scientific research and development (R&D) and for science education. Through these actions—and participation in the state economy from employment and operational activities—NETL serves as an important economic catalyst for the state. To quantify the laboratory's economic and environmental impacts on West Virginia, NETL developed a state-level environmental input-output (IO) model. Presented here is a summary of the resulting analysis.

The data in the following table represent NETL's direct impact on West Virginia's economy during 2006. The data include employment, wages, and salaries of West Virginia residents employed at NETL's sites in Morgantown, WV, and Pittsburgh, PA. It also includes NETL's direct operational expenditures and R&D award and grant monies spent within the state. The data show that NETL directly supported the employment of 537 West Virginians in 2006 and injected nearly \$75 million into the state economy.

Direct Economic Impact of NETL on the State of West Virginia, 2006

Input Category*	West Virginia
Federal Employment (jobs)	208
Site-Support Contractor Employment (jobs)	329
Federal + Site-Support Contractor Employment (jobs)	537
Federal Wages and Salaries	\$23.3
Site-Support Contractor Wages and Salaries	\$17.4
Federal + Site-Support Contractor Wages & Salaries	\$40.7
Federal Operational Expenditures	\$4.6
Site-Support Contractor Operational Expenditures	\$2.9
Federal + Site-Support Contractor Operational Expenditures	\$7.5
Federal R&D Awards/Grants, Costs	\$26.6
Total Direct Impact on West Virginia	\$74.8

* Monetary data shown in millions of dollars (\$2006)



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National Energy Technology Laboratory

Albany, OR

Fairbanks, AK

Morgantown, WV

Pittsburgh, PA

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Because the West Virginia economy supplies a portion of NETL's total employment and operational demand, NETL activities produce extended (indirect) impacts on the state's economy. NETL's total impact on the state of West Virginia, both direct and indirect, is shown below.

*Direct and Indirect Economic Impact of NETL
on the State of West Virginia, 2006*

Impact Category*	West Virginia
Expenditures (including wages, salaries, and operational and R&D spending)	\$100
Employment (jobs)	1,150
Output Multiplier	1.34
Employment Multiplier	2.14
Employment per Million \$	18.7

* Monetary data shown in millions of dollars (\$2006)

The results of the analysis show that the economic output multiplier for West Virginia is 1.34. Therefore, for every \$1 million of NETL final demand that remains within West Virginia, the state economy grows by \$1.34 million. The employment multiplier of 2.14 indicates that for every one employee at NETL, an additional 1.14 employees are needed throughout the state economy to fulfill the state-level demands of NETL's supply-chain; this yields a total employment impact of 1,150 jobs. On an employment-per-dollar basis, the analysis shows that employment increases by approximately 19 persons for each \$1 million that remains in the state.

NETL strives to be an environmental steward and emphasizes environmental responsibility in the workplace. Not surprising, then, is the relatively small environmental impact on West Virginia stemming from NETL activity. Below are data that reflect NETL's contribution to West Virginia's criteria pollutant emissions.

NETL Contribution to West Virginia Emissions, 2006

Criteria Pollutant	Total West Virginia Emissions (metric tonnes)	Total NETL Emissions (metric tonnes)	NETL Relative Impact on West Virginia
SO _x	669,958	190.0	0.018%
CO	280,996	248.0	0.203%
NO _x	396,551	130.0	0.033%
VOC	46,310	23.4	0.113%
PM ₁₀	31,975	6.7	0.028%
PM _{2.5}	18,757	3.4	0.019%

NETL's analysis excludes induced income impacts—those resulting from households spending their salaries in the state economy. The analysis also excludes impacts stemming from the deployment of NETL-sponsored technologies. Therefore, NETL's impact on West Virginia, as represented in this study, is considered to be a conservative estimate.

For more details about the economic theory underlying the study, the study's project methodology, and its analysis and results, please read the full report, National, State, and Regional Economic and Environmental Impacts of NETL, which is located online at <http://www.netl.doe.gov/energy-analyses/pubs/NETLimpactsPAandWV.pdf>.



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