



From mine safety to acid rain mitigation, the U.S. Department of Energy's National Energy Technology Laboratory (NETL) in Pittsburgh has a rich history of developing technologies through transformative science that improve the efficiency and utilization of our nation's fossil energy resources. Since 1910, NETL's Pennsylvania Laboratory has pioneered work on coal, oil, and natural gas technologies with a focus on resolving environmental issues. The Lab's successes have included developing workable technologies to address acid rain, reducing mercury emissions at power plants, and spearheading horizontal drilling technologies that helped usher in the shale gas boom. Through its research activities, science education programs, employment, and operational activities, NETL serves as an important economic catalyst for Pennsylvania.



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## STATE ECONOMIC IMPACTS OF NETL - PENNSYLVANIA

NETL conducted an economic analysis using a state-level input-output (IO) model to quantify the laboratory's economic impacts on Pennsylvania. The two tables below summarize NETL's impacts on Pennsylvania's economy in 2019.

The first table includes employment and salaries of individuals employed in Pennsylvania at NETL as either federal employees or site support contractors (full-time equivalents), as well as NETL's spending on grants, R&D awards, contracts, cooperative agreements, and purchase orders, within Pennsylvania. The analysis revealed that NETL injected \$108 million (\$108M) directly into the state economy in 2019.

## Summary of NETL expenditures and number of on-site employees (PA)

Impact Category	
Federal Employment and Site Support Contractor (full-time equivalent jobs)	560
Total Expenditures	\$108M

NETL's impact on Pennsylvania's economy is greater than the lab's total direct spending because money spent by NETL is spent again by the recipient employees and businesses. This economic "ripple effect" is captured in the IO model through a series of multipliers that provide estimates of the impact of each dollar of direct spending cycling through the state economy in the form of additional (indirect and induced) spending, personal income, and employment. The analysis concluded that NETL had a total estimated impact of \$198 million (\$198M) on Pennsylvania's economy in 2019 (see table below).

## NETL's Total Economic Impact on the State of Pennsylvania, 2019

Impact Category	
Jobs (direct, indirect, and induced full-time equivalent jobs)	1,215
Total Economic Impact (direct, indirect, and induced)	\$198M