



STATE ECONOMIC IMPACTS OF NETL *PENNSYLVANIA*

The U.S. Department of Energy's (DOE) National Energy Technology Laboratory (NETL) supports energy-related research and development (R&D) activities and science education programs throughout Pennsylvania and the nation. Through these actions—and participation in the state economy from employment and operational activities—NETL serves as an important economic catalyst for Pennsylvania.

NETL conducted an economic analysis using a state-level input-output (IO) model to quantify the laboratory's economic impacts on Pennsylvania. This document presents the findings of that analysis, as well as an estimate of NETL employment impacts specific to funding in the American Recovery and Reinvestment Act (hereafter referred to as the Recovery Act).

The table below presents NETL's direct impact on Pennsylvania's economy during 2009. Data include employment, wages, and salaries of the 322 Pennsylvania residents employed at NETL. It also includes NETL's direct operational expenditures (e.g. hand tools, copier paper, laboratory supplies), as well as R&D award and grant monies spent within the state. The analysis indicates that through these activities NETL injected \$132 million directly into the state economy in 2009 (all dollar figures in the tables are in millions).

Direct Economic Impact of NETL on the State of Pennsylvania, 2009

Input Category	Pennsylvania
Federal Employment (jobs)	322
Federal Wages and Salaries	\$39 M
Federal Operational Expenditures and Federal R&D Awards & Grants	\$94 M
Total Direct Impact on Pennsylvania*	\$132 M

*Inputs may not sum to total due to rounding



The impact of NETL on Pennsylvania's economy is greater than the total of the lab's direct spending because money spent by NETL is spent again by the recipient employees and businesses. This economic "ripple effect" is measured in the IO model through a series of multipliers that provide estimates of the number of times each dollar of direct spending cycles through the state economy in the form of additional (indirect and induced) spending, personal income, and employment. The full impact is actually larger than the estimates in the table below because they do not capture the indirect and induced impacts that "leak" into other states.

***Total Economic Impact of NETL
on the State of Pennsylvania, 2009***

Impact Category*	Pennsylvania
Employment (jobs)	2,461
Expenditures (including wages, salaries, operational, and R&D spending)	\$513 M

*Monetary data adjusted to millions of dollars (\$2009)

NETL also received Recovery Act funding in 2009, which is not factored into the economic estimates above, to make public investments that save and create jobs, and cushion the impacts of the economic downturn. NETL followed guidance provided by the Executive Office of the President¹ to estimate the job creation and retention impacts from the \$353 million in NETL Recovery Act funding expended in Pennsylvania. These estimates are not comparable to the non-Recovery Act sponsored employment impacts because the methodology applied to the Recovery Act funding measures the impact over the entirety of the project life, whereas the economic impact estimates in the tables above reflect single-year funding and employment.

***Recovery Act Economic Impact of NETL
on the State of Pennsylvania***

Impact Category	Pennsylvania
Employment (job years created or retained)*	3,832
Recovery Act Funding	\$353 M

*Not comparable to estimates in other tables due to different job impact methodologies

¹Executive Office of the President - Council of Economic Advisers from their May 2009 report titled "Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009"

CONTACT

Lisa C. Phares

National Energy Technology
Laboratory

3610 Collins Ferry Road

P.O. Box 880

Morgantown, WV 26507

304-285-2063

NATIONAL ENERGY TECHNOLOGY LABORATORY

Albany, OR • Fairbanks, AK • Morgantown, WV • Pittsburgh, PA • Sugar Land, TX

Website: www.netl.doe.gov

Customer Service: 1-800-553-7681