



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

pennsylvania PA

American Recovery and Reinvestment Act

A Year of Recovery: PA's Environment and Energy Portfolios

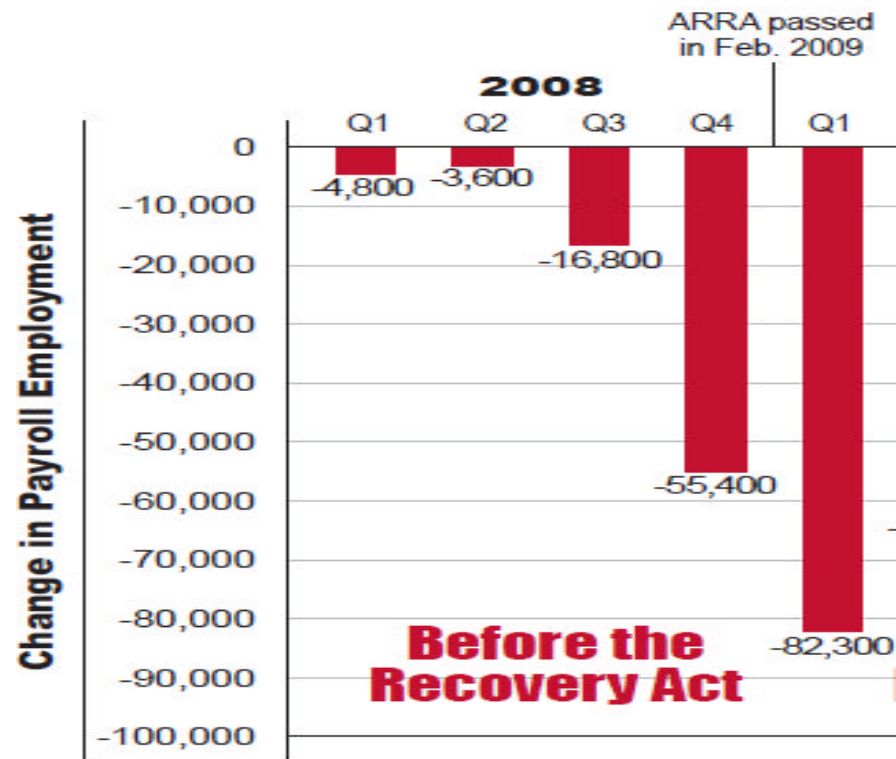
May 2010



RECOVERY.gov



Background: Where we started

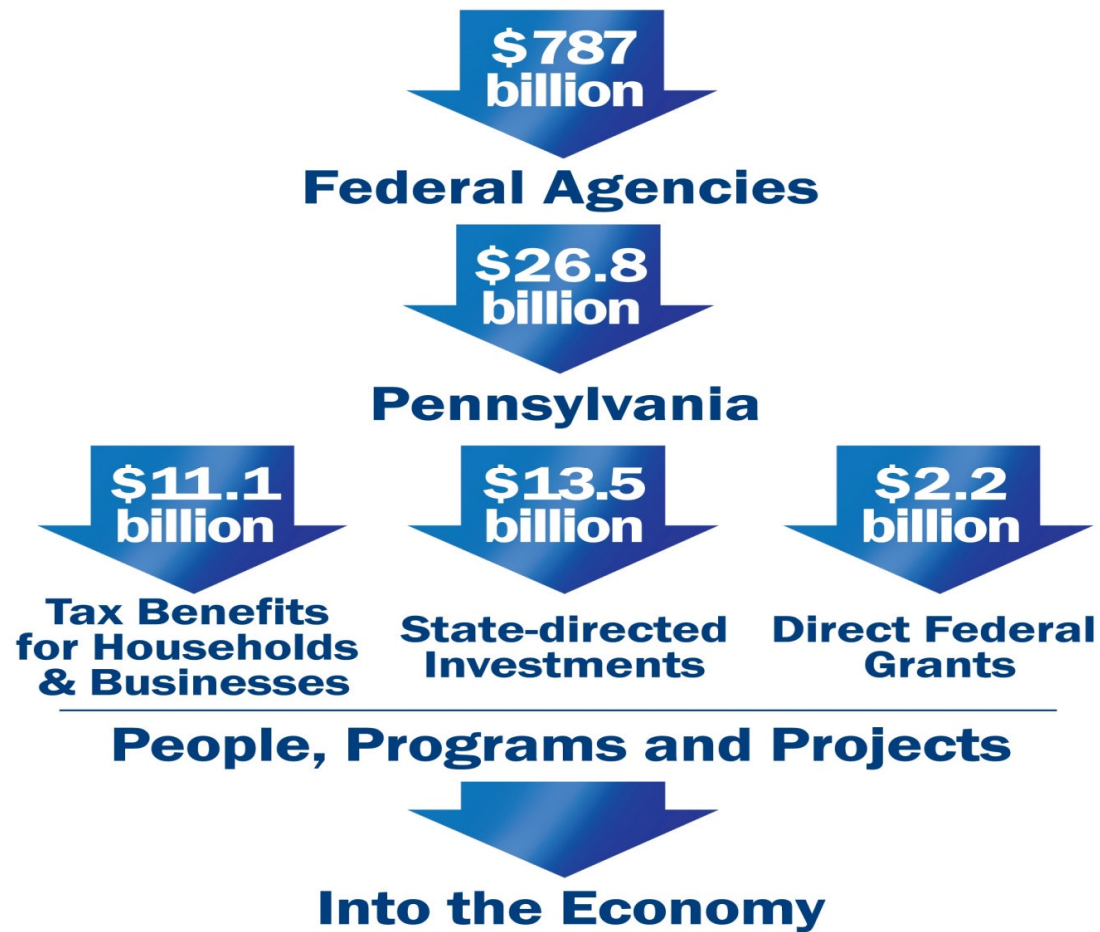




Why ARRA?

- **Purpose of ARRA** American Recovery and Reinvestment Act of 2009, Pub.L.111-5, February 17, 2009
- Jobs...and more
 - Help those in need
 - Increase economic efficiency; spur technological advances
 - Create long-term benefits in transportation, environmental protection
 - Stabilize budgets

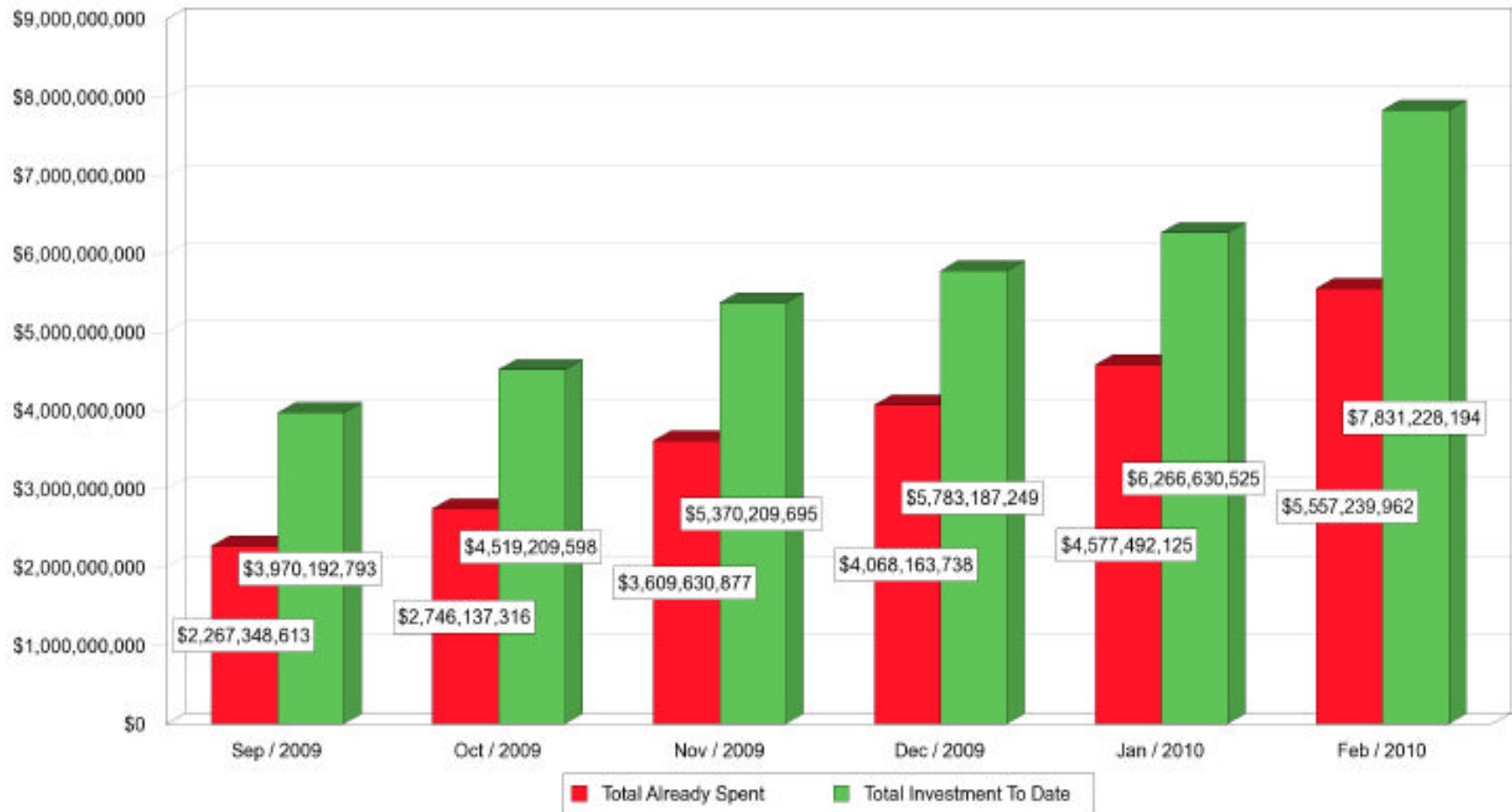
Follow the money




Pennsylvania's Investments



Recovery Act Cumulative Investment






9 Billion Invested (through April 15)

- For quarter ended March 31, 2010 - \$8.5 billion vs. \$5.8 billion Q4 2009
- Significant investment increases Q1 2010 over Q4 2009—

□ Education	\$1.6 billion	+83%
□ Health Care	\$2.4 billion	+60%
□ Environment	\$11.5 million	+60%
□ Workforce	\$2.6 billion	+30%
□ Energy	\$299 million	+32%
□ Community/Family Support	\$149 million	+31%
- Investment per PA household - \$1,700 vs. \$1,200



Something Old, Something New

- “Formula” – Old EPA and DOE programs
 - CWA and DW State Revolving Funds: water treatment infrastructure (PennVEST)
 - LUST
 - State Energy Program – Alternative Energy
 - Energy Efficiency Conservation Block Grants

- ARRA Add-ons
 - Shovel-ready; funding claw backs
 - Jobs creation
 - Davis Bacon – Federal Prevailing Wage
 - Buy American
 - NEPA



ARRA – Environment

■ Environment

- Water Infrastructure (PennVEST) \$220 Million
- Clean Diesel \$1.7 Million
- Leaking Underground Storage Tanks (LUST)
\$6.2 M
- Water Assessment and Monitoring 604(b)
\$1.6 M



PennVEST Water Infrastructure

- **\$220 Million ARRA Funds into PennVEST**
Loans and grants: CWSRF and DWSRF
 - \$34.3 M for 7 projects to eliminate 1216 malfunctioning on-lot sewage systems
 - \$38.4 M for 7 projects to eliminate discharges of raw sewage into streams
 - \$179 M for 17 projects to reduce overflows of sewage and stormwater
 - \$105 M for 17 projects to reduce nutrients and sediment to Chesapeake Bay



PennVEST Water Infrastructure

- **What's new?**

- 50% ARRA funds in subsidy; affordability
- 20% ARRA funds in green projects- 54 green infrastructure projects: porous pavements, green roofs, urban raingardens and treeboxes; energy
- New green infrastructure ranking adopted March 2010 by PennVEST Board



PennVEST: Shovel-Ready

- All \$220 Million ARRA funds
- plus \$772 Million base program awarded
- April and July, 2009 PennVEST meetings
- All ARRA funds under construction contract by 2/17/10!
- Met **20% Green Infrastructure requirement**

Energy Audit Program

- Designed to promote “green” thinking
- Offered to those “traditional” projects selected in April
- Some success:
 - 5 out of 58 projects participating
- Process:
 - Preliminary analysis of designs
 - Comprehensive energy audit
 - Changes to project design through change orders






Green Water Projects

- Snyder CCD - Riparian Stream Buffer Tree Planting Project: Establish 52 acres of forested riparian buffers along streams spanning 26 different private properties, and 5 contiguous counties.
- Penn State University – 604 (b) Grant for research and development of an improved watershed modelling tool to understand stormwater impacts in watersheds
- Chester County Conservation District - \$1.8 Million to reduce sediment and nutrient loadings of local streams with 34 separate projects: rain gardens, riparian buffers and stormwater infiltration basins
- Horticultural Society of Western PA - \$1.6 million to capture and recycle 2.5 million gallons of stormwater to replace public water supply for irrigation
- East Liberty, Pittsburgh - \$1.246 M Parking Lot Landscaping



Some Projected Results !!

- Savings of:
 - 15 million Kilowatt hours per year = \$3.2 million savings
 - 1.5 million gallons of water per year through water conservation measures
- Reduction of:
 - 1.3 million pounds of nitrogen
 - 4 million pounds of phosphorus
 - 1055 tons of sediment
 - 36 million pounds of carbon emissions
- Other:
 - Plant over 29 miles of forested buffers, 15,640 trees
 - Restoration of 80 acres of wetlands
 - Re-use of over 100 million gallons of wastewater
 - Eliminate 51.5 million gallons of storm water flow and flooding through infiltration



ARRA - Energy

\$136.5 Million for Energy Programs

- \$99.6 Million for the State Energy Plan,
- \$23.5 Million for EECBG
- \$11.9 Million for Home Heating Equip. Rebate
- \$1.3 Million for Energy Assurance Planning.

Note: \$253 million allocated to the Weatherization Assistance Program under the Department of Community and Economic Development



Energy Programs

- PA Conservation Works!
- PA Green Energy Works!
 - Sustainable Business Recovery
 - Combined Heat & Power
 - Clean Biogas
 - Solar Project Funds
 - PA Wind Initiative
 - Green Development Loans
 - Geothermal Buildings
- Home Heating Equipment Rebates
- Energy Assurance Planning



Energy Projects:

Conservation Works!

- **Energy efficient lighting**, including: LED traffic lights in Lansdowne and a seven-county project in NE, Airport Terminal lighting in Pittsburgh, Parking Garage in Allentown, solar lighting in Northern Pike County
- **Energy Efficient Building Upgrades** in schools, township and municipal buildings, including Misericordia, Bloomsburg U., Bucknell U., Decatur and Bradford Townships, the City of Franklin



Energy Projects

- **Centre County - Millheim Borough Energy Efficiency Projects: \$233K**

- Millheim Borough Building: geothermal heating system replaces old oil furnace and propane heaters, window replacements with double paned argon insulated windows
- Millheim Water Treatment Plant will install variable frequency drives (VFD) on motors.
- Energy audits show the combined projects will reduce energy consumption by 338 MMBtu or 66.7% saving valued at \$4,430 per year.
- Creates 6 temporary jobs, and saves two permanent jobs



Energy Projects: Green Energy Works!

- **Crayola, LLC** Deploying a 1.9 MW solar powered facility to supply 10% of its power needs and one-third of the energy consumed for crayon manufacturing.
- **Abington Memorial Hospital** Installation of a 4.5 megawatt natural gas-fired combustion turbine that will produce steam for heating and cooling and serve approximately 66 percent of its onsite electricity needs
- **Derry Township Municipal Authority, York City Sewer Authority** Biogas projects to reduce operating costs of treatment facilities.



ARRA Heating Equipment Rebates

- \$11.9 million formula grant to PA from US DOE
- Rebates for non-electric hot water heaters, furnaces and boilers (NOT retroactive)
- Range from \$250- \$500
- An on-line reservation system ensures that rebates are easily available
- Program opened April 21,2010
 - About 15% reserved to date; 5800 rebates averaging about \$300, totaling 1.7 Million



Energy Program Results

- About 90% of the \$132 Million in ARRA energy project funds are under construction contract
- Total leveraged from grantees: \$225.7 million
- Electricity Generated/Saved: 4.1 million MWH -
at least \$200 million
- Natural Gas Generated/Saved 5.2 Bcf -
at least \$52 million
- Jobs Created/Retained: Over 650 with another
another 500 expected

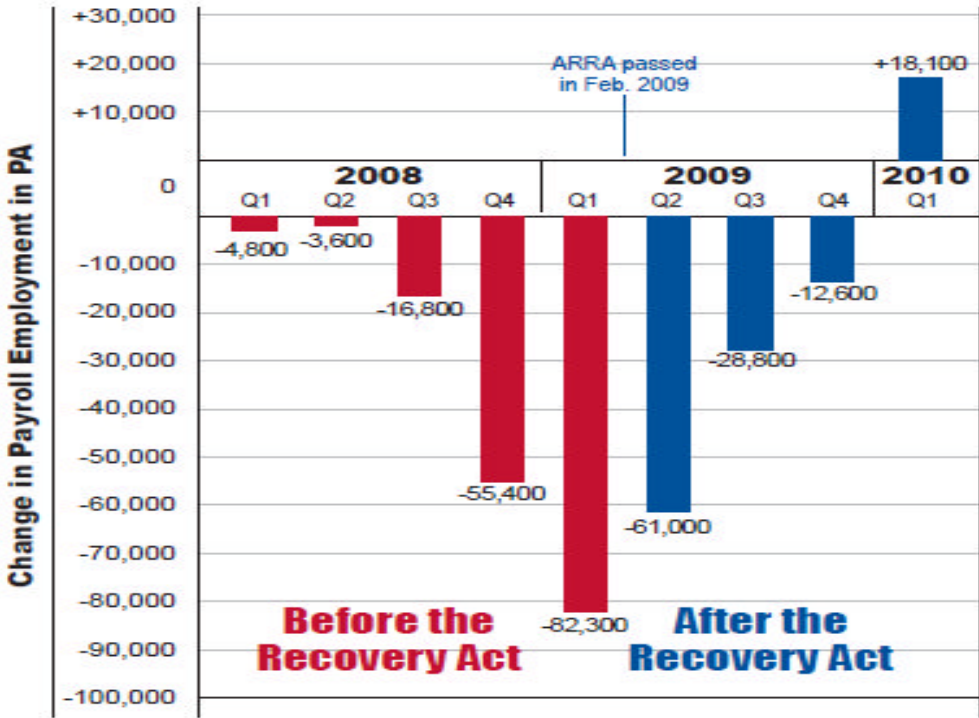


Jobs: Counting and Counting

- ARRA 1512 Reporting
- Hours directly funded by ARRA funds on the ARRA jobsite, converted to FTEs
- Jobs “created or retained” vs. “Jobs funded”
- Headcount on the jobsite, especially for construction “jobs”
- No inclusion of offsite jobs, cement, drivers, diners, etc.

Stimulate

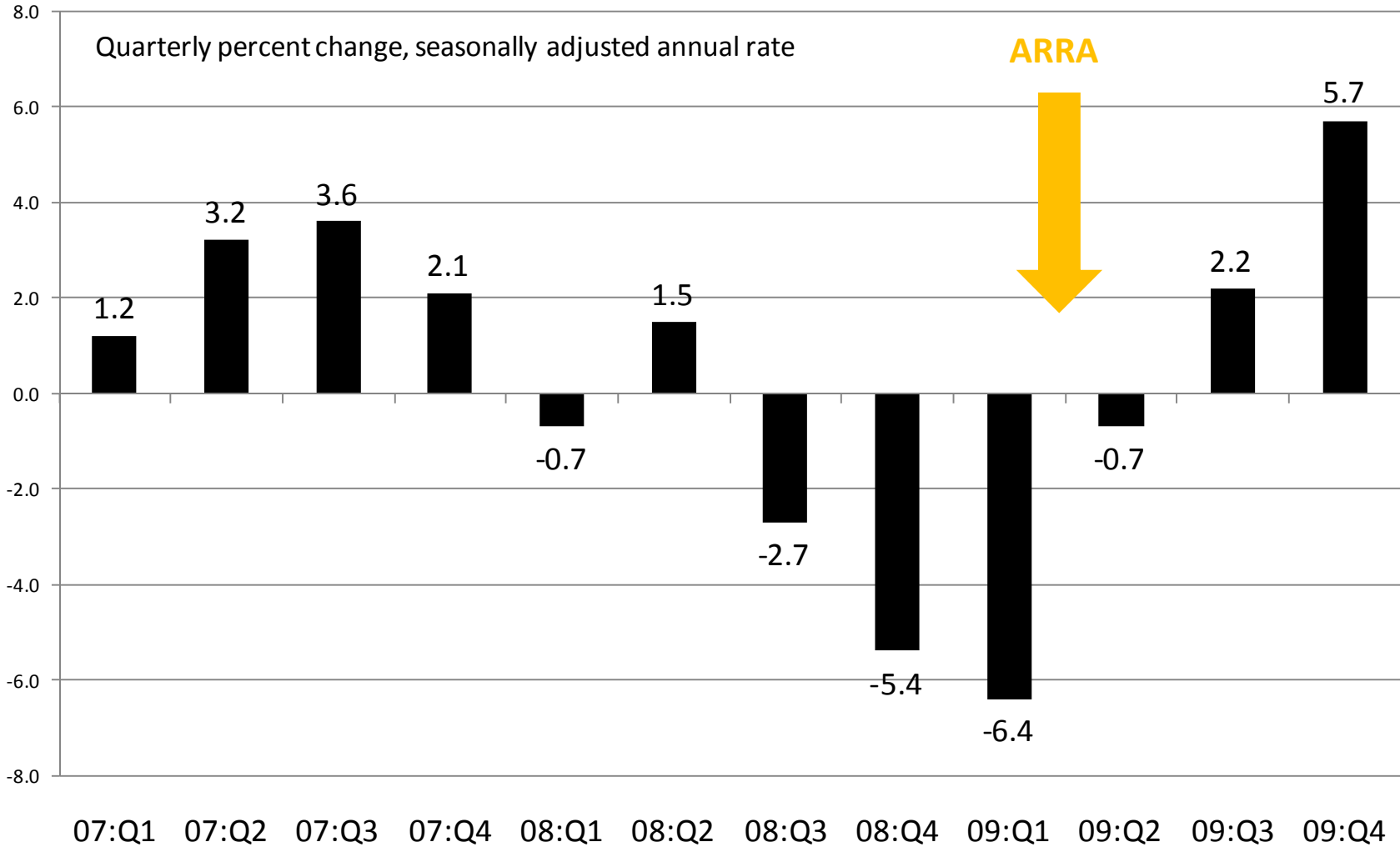
Job Loss Trend Has Turned Around Since the Recovery Act Passed



Data Source: Center for Workforce Information and Analysis, Pennsylvania Dept. of Labor & Industry



Real GDP Growth



Source. Bureau of Economic Analysis

Accountability and Transparency

Where Is Your Money Going? - Windows Internet Explorer

http://www.recovery.pa.gov/portal/server.pt?open=514&objID=5191218&mode=2&countyname=Chester&contentid=http: Live Search

File Edit View Favorites Tools Help

Where Is Your Money Going?

This website wants to run the following add-on: 'MSXML 5.0' from 'Microsoft Corporation'. If you trust the website and the add-on and want to allow it to run, click here...

Home About Accountability & transparency Impact News Reports Public Input Hotline Opportunities

Chester County **RSS**

American Recovery and Reinvestment Act Funding

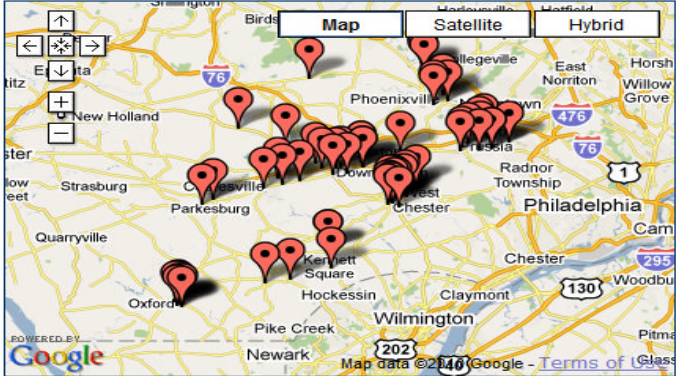
Education

- [Erin Dudley Forbes CS](#)
- [21st Century Cyber CS](#)
- [Avon Grove CS](#)
- [Pennsylvania Leadership CS](#)
- [Sankofa Academy CS](#)
- [Avon Grove SD](#)
- [Coatesville Area SD](#)
- [Downingtown Area SD](#)
- [Chester Co Family Academy CS](#)
- [Collegium CS](#)
- [Renaissance Acad-Edison CS](#)
- [Great Valley SD](#)
- [Graystone Academy CS](#)
- [Kennett Consolidated SD](#)
- [Octorara Area SD](#)
- [Owen J. Roberts SD](#)
- [Oxford Area SD](#)
- [Phoenixville Area SD](#)
- [Tredyffrin-Easttown SD](#)
- [Unionville-Chadds Ford SD](#)
- [West Chester Area SD](#)
- [Agora Cyber CS](#)

Transportation Infrastructure

- [State St Abut Remove \(C\)](#)
- [Chstr Villy Trail Phs1\(C\)](#)
- [ADA Ramps Chester\(C\)](#)
- [US 30 Exton Bypass\(C\)](#)
- [ChesCo, ARRA Paving\(C\)](#)
- [TredyffrinSidewalksPh1\(C\)](#)

Job Training & Relief for



Map Satellite Hybrid

Local Information & Projects

[Learn how our recovery money is being used across the state.](#)

Get Instant Updates on Recovery Activities

[Learn More ...](#)

New Resources for Businesses

New opportunities and resources for businesses are available. [Learn more.](#)

Oversight Commission

start

2 Micro... Microsoft P... ARRA_jobs... 2 Paint Where Is Y... 9:21 AM

Transparency and Accountability

"The Federal stimulus bill makes it possible for Pennsylvania to provide relief for our families and to reinvest in our economic growth. Welcome to Pennsylvania's website dedicated to transparency and accountability for the resources the Commonwealth will receive under the American Recovery and Reinvestment Act."

- Governor Edward G. Rendell



www.recovery.pa.gov



ARRA PennVEST: Allegheny County

- **ALCOSAN - \$11.775 M Sewer line replacement reduces I&I, CSO**
- **Ambridge Borough - \$5.657 M Sewage treatment plant upgrade**
- **Neville Twp. - \$3.022 M Sewage forcemain replacement**
- **Pittsburgh Water and Sewer Auth - \$11.655 M filter backwash recycling, tank rehab, valve and hydrant replacements**
- **Sewickley Boro - \$6.626 M Upgrade electrical system efficiency**
- **Botanic Garden of W. PA - \$1.866 M Stormwater for irrigation**
- **East Liberty, Pittsburgh - \$1.246 M Parking Lot Landscaping**



Cambria - Energy Projects

- **Bishop McCort High School** – Final Phase of major energy efficiency upgrade, replace 187 antiquated single-pane windows, maximizing the impact of recent renovations that have included computerized climate controls and energy efficient lighting. Will reduce greenhouse gas emissions by nearly 800 tons a year; reduce electrical (30%) and natural gas (53%) consumption; generate cost savings exceeding \$64,000 a year; and retain eight local jobs.
- **Weatherization Program** - \$4.1 M will weatherize 535 low income homes averaging \$6500 per home



Allegheny County - Energy

- \$20 Million - Weatherize 3000 homes
- East Liberty Branch Library- Upgrade roof, walls and windows: 20% energy reduction
- Energy efficient lighting:
 - Pittsburgh Int'l Airport
 - Traffic Signals and Street lights
 - Allegheny Hospital Garage
- Baldwin Municipal Buildings upgrade- 26% energy reduction, HVAC and windows



Allegheny - Environmental

- LUST projects at former Dairy mart and Zirwas Atlantic sites
- Clean Diesel – city of Pittsburg retrofits 33 refuse trucks with Diesel Particulate Filters
- 604(b) Monitoring and Assessment – Development of a biological assessment protocol for non-wadeable streams



Energy Projects

- Conservation Works!
 - LED traffic lights in Lansdowne and Airport Terminal lighting in Pittsburgh
- Green Energy Works!
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 - **Abington Memorial Hospital** Installation of a 4.5 megawatt natural gas-fired combustion turbine that will produce steam for heating and cooling and serve approximately 66 percent of its onsite electricity needs



Cambria – Water Infrastructure

- Cresson Borough M.A. – 2 loans and grants totalling \$7.6 M to reduce wet weather overflows at sewage plant
- Dale Borough - \$5.3 M grant and \$660K loan to build 5 miles of sewer collection to separate a combined sewer and stormwater system
- East Conemaugh Borough - \$5.4 M grant and \$1M loan to separate combined sewer system
- Jackson Twp W.A. - \$1.7 M in pump station, tanks and distribution upgrades to drinking water
- Snyder CCD - Riparian Stream Buffer Tree Planting Project:
Establish 52 acres of forested riparian buffers along streams spanning 26 different private properties, and 5 contiguous counties.