PART II:
FISCAL YEAR 2008 PERFORMANCE REPORT

INTRODUCTION

The Government Performance and Results Act of 1993 (GPRA) requires all federal agencies to submit a report to Congress on actual program results at the end of each fiscal year. This report documents the Appalachian Regional Commission's (ARC) progress toward fulfilling its mission and goals. The report

- Compares ARC performance goals to estimated results reported by the projects of the 13 Appalachian states;
- Summarizes the findings of several ARC-initiated evaluations and project validation endeavors; and
- Describes unmet performance goals and explains why those goals were not met, and, if goals are impractical or infeasible, identifies steps to be taken to address the problem.

To meet GPRA requirements, ARC has defined performance measures and goals for all major ARC operations. In FY 2008, ARC

- Collected and entered state estimates of results for FY 2008 into a database as part of daily operations and project management;
- Evaluated the planned and actual results of a sample of projects funded in FY 2005 and FY 2006 through field visits and interviews with those managing the projects; and
- Conducted independent evaluations to ascertain the benefits of projects.

ARC uses performance data as a management tool to inform the management process. In addition, staff use ARC.net, ARC's management information system, to track critical project performance information. ARC staff review performance measurement data generated by projects throughout the fiscal year to analyze trends and validate data. ARC routinely shares such information with partners through "best practices" conferences and on-site validation visits with grantees. ARC's Policy Development Committee has also used research, evaluations, validation visits, and staff monitoring to develop and revise guidelines for program activities.

The four general goals from ARC's 2005–2010 strategic plan, *Moving Appalachia Forward*, were used to evaluate performance in FY 2008.

FY 2008 Outcome Goals and Intermediate Results	
ANNUAL OUTCOME GOAL	**INTERMEDIATE ESTIMATES**
20,000 Jobs Created or Retained	35,292 Jobs Created or Retained
20,000 Students/Trainees with Improvements	20,432 Students/Trainees with Improvements
20,000 Households Served	21,538 Households Served
25 Additional Miles (Net Increase) of the ADHS Opened to Traffic	35.5 Additional Miles (Net Increase) of the ADHS Opened to Traffic

The following sections of this report present an overview of the Appalachian Regional Commission, a list of ARC goals and objectives, a description of the methodology employed to monitor project outcomes in compliance with the GPRA, the estimated outcomes for projects funded in FY 2008 and each of the three prior fiscal years, and the results of project validation samplings and project evaluations.

OVERVIEW OF ARC

ARC's vision is that Appalachia will achieve socioeconomic parity with the nation.

ARC's mission is to be a strategic partner and advocate for sustainable community and economic development in Appalachia.

Organizational Structure

The Appalachian Regional Commission is a regional economic development agency representing a unique partnership of federal, state, and local governments designed to address local needs in Appalachia. ARC was established by an act of Congress and operates under congressional authorizations. In FY 2008, Congress completed work on legislation that reauthorizes the Commission for five years, through FY 2012, and adds ten counties to the Region (effective in FY 2009).

The Commission is composed of the governors of the 13 Appalachian states and a federal co-chair, who is appointed by the president. Grassroots participation is provided through multi-county local development districts, with boards made up of elected officials and other local public and private leaders. Each year Congress appropriates funds for the Commission's programs, which ARC allocates among its member states. At the beginning of their terms in office, Appalachian governors submit development plans for the Appalachian counties in their states. The Commission votes to approve these plans. The governors also submit annual strategy statements developed from the plans, and must select projects for ARC approval and funding based on these statements.

Project Funding

ARC funds more than 400 projects annually throughout the 13-state Appalachian Region. All of the projects must address one of the four goals in ARC's 2005–2010 strategic plan: increase job opportunities and per capita income in Appalachia to reach parity with the nation; strengthen the capacity of the people of Appalachia to compete in the global economy; develop and improve Appalachia's infrastructure to make the Region economically competitive; and build the Appalachian Development Highway System to reduce Appalachia's isolation. The Commission's strategic plan identifies the goal areas as the basic building blocks of sustainable economic development in the Region.

All projects are approved by a governor and by ARC's federal co-chair. ARC provides technical assistance to grantees in an effort to increase the likelihood that the project will be successful.

One of the key differences between ARC and typical federal executive agencies and departments is the flexibility given to the states in determining how their allocated funds will be spent. This flexibility exists within a framework: funds must be spent in counties designated as part of the Appalachian Region; projects must address one or more of the Commission's four goals; and a specified amount of the funds allocated to each state can be used only on projects that benefit counties and areas the Commission has designated as economically distressed.

GENERAL GOALS AND OBJECTIVES

In accordance with its 2005–2010 strategic plan, ARC organizes its funding policies and administration around four goals to carry out its mission. Strategic objectives under each goal embody core ARC policies.

GENERAL GOAL 1: Increase Job Opportunities and Per Capita Income in Appalachia to Reach Parity with the Nation.

Strategic Objectives

1.1: Foster Civic Entrepreneurship
1.2: Diversify the Economic Base
1.3: Enhance Entrepreneurial Activity in the Region
1.4: Develop and Market Strategic Assets for Local Economies
1.5: Increase the Domestic and Global Competitiveness of the Existing Economic Base
1.6: Foster the Development and Use of Innovative Technologies
1.7: Capitalize on the Economic Potential of the Appalachian Development Highway System

Outcome measure: Number of jobs created or retained.

GENERAL GOAL 2: Strengthen the Capacity of the People of Appalachia to Compete in the Global Economy.

Strategic Objectives

2.1: Foster Civic Entrepreneurship
2.2: Enhance Workforce Skills through Training
2.3: Increase Access to Quality Child Care and Early Childhood Education
2.4: Increase Educational Attainment and Achievement
2.5: Provide Access to Health-Care Professionals
2.6: Promote Health through Wellness and Prevention

Outcome measure: Number of students/trainees with improvements.

GENERAL GOAL 3: Develop and Improve Appalachia's Infrastructure to Make the Region Economically Competitive.

Strategic Objectives

3.1: Foster Civic Entrepreneurship

3.2: Build and Enhance Basic Infrastructure

3.3: Increase the Accessibility and Use of Telecommunications Technology

3.4: Build and Enhance Environmental Assets

3.5: Promote the Development of an Intermodal Transportation Network

Outcome measure: Number of households served with new or improved water and/or sewer infrastructure, and number of jobs created or retained.

GENERAL GOAL 4: Build the Appalachian Development Highway System to Reduce Appalachia's Isolation.

Strategic Objectives

4.1: Foster Civic Entrepreneurship

4.2: Promote On-Schedule Completion of the Appalachian Development Highway System (ADHS)

4.3: Coordinate Work on ADHS State-Line Crossings

Outcome measure: Net increase in the number of miles of the ADHS open to traffic.

PERFORMANCE MEASUREMENT METHODOLOGY

Overview of ARC's Performance Measurement System

ARC's performance measurement system was designed to accomplish two primary objectives: compliance with the GPRA in measuring the outcomes of ARC projects, and creation of a process that allowed for both feedback from grantees and analysis of funded projects, in an effort to improve programming.

ARC's performance measurement system has three components:

- Project data collection and analysis through use of a management information system;
- Site visits to validate actual outcomes of a sample of projects; and
- Independent project evaluations.

These three components work together to allow GPRA reporting and compliance and to help ARC glean "lessons learned" from previously funded grants. By structuring the measurement system in this manner, ARC has made the GPRA a management tool and a valuable resource in determining program effectiveness.

This report presents performance goal results for each of ARC's four general goal areas. It is important to note that two outcome measures cut across general goal areas. To simplify the reporting of these measures, results from each general goal area are totaled and reported under the general goal that most closely aligns with the outcome measure. For example, one of ARC's outcome measures is jobs created or retained. ARC measures results for jobs created or retained by projects funded under General Goals 1, 2, and 3. For clarity, this outcome measure is discussed, and results from all three general goal areas are reported, under General Goal 1: "Increase job opportunities and per capita income in Appalachia to reach parity with the nation."

Project Data Collection and Analysis

Annual Performance Goals and Measures

Each fiscal year, ARC submits to the Office of Management and Budget (OMB) annual performance goals for projects to be funded in coming years, as required in the budget submission process. In determining these goals, ARC develops likely investment scenarios for the 13 Appalachian states, anticipating how each state will direct ARC funds in addressing the four general goal areas. The scenarios are based on state development plans, strategy statements, historical trends, and communication with the states. ARC uses these scenarios to project results; however, the states have flexibility in spending decisions, although all projects are reviewed and approved by the federal co-chair and must pursue one of ARC's four general goals. The states' spending flexibility is a critical element of the ARC federal-state partnership but poses challenges in setting performance goals. Each state's priorities will shift from year to year, occasionally producing unanticipated results.

Before FY 2005, ARC focused on assessing progress toward reaching outcome performance goals. As a result of OMB's 2004 review of the ARC program using the Program Assessment Rating Tool, ARC established measurements for assessing progress toward reaching two additional performance goals: (1) leveraging non-ARC project funding and private non-project investments resulting from the completion of ARC-funded projects, and (2) targeting ARC funds to benefit distressed counties and areas. ARC now measures progress in reaching all three performance goals. Both non-ARC funds used as a match in projects and non-project leveraged private investments have been recorded by ARC in the past; however, in FY 2005 ratios of these funds to ARC funding were established as annual goals.

To address reporting requirements, ARC reports results toward reaching these three performance goals in four program categories (jobs and income, competitiveness, infrastructure, and highways) that reflect priorities within the Commission's four general goals. Although the projects funded by ARC each year generate many more measures than those reported for GPRA compliance, the measures reported relate uniquely to ARC's four general goals and to its mission (see table on page 45).

Program Category One: Jobs and Income. The following measures are presented in General Goal 1.

1) *Outcome Measures:* The number of jobs created and the number of jobs retained.

"Jobs created" includes any direct hires that will be made as a result of the project's operation, not including highway or building construction jobs. Also included are private-sector jobs that will be created within three years after ARC-funded services or projects are complete. These jobs are usually related to additional investments in manufacturing plants and equipment, and retail and commercial real estate development. Part-time jobs are converted to full-time equivalents and rounded up to whole numbers.

"Jobs retained" refers to the number of workers actually enrolled in specific training programs, or to the number of jobs at businesses that will be retained because of an investment that is needed to keep the businesses and jobs in the area or in continued operation.

These two measures are combined and reported together as "jobs created/retained."

2) *Leveraging Measure:* The ratio of leveraged private investment (LPI) to ARC investment for all General Goal 1 projects.

LPI represents private-sector, non-project financial commitments that follow and are the result of the completion of an ARC-supported project or the delivery of services under an ARC-supported project. Leveraged private investment is a performance measurement because it is a desired outcome; and it represents the private investment supporting job creation. It is generally estimated for the three-year period following the completion of a project and is separate from any direct private contribution to ARC-supported project funding.

3) *Targeting Measure:* The percentage of nonhighway ARC funds used for projects that benefit distressed counties or areas.

Program Category Two: Competitiveness. The following measures are presented in General Goal 2.

1) *Outcome Measures:* The number of students with improvements and the number of workers/trainees with improvements.

"Students with improvements" is the number of students who, as a result of an ARC-funded project, receive a career credential or obtain a job in the field for which they were specifically trained, or are certified or passed to the next grade or level necessary to continue their education.

"Workers/trainees with improvements" is the total number of participants that obtain new employment or enhanced employment (e.g., receive higher pay or better positions) as a result of ARC-funded projects.

These two measures are combined and recorded together as "students/trainees with improvements."

2) *Matching Measure:* The ratio of non-ARC to ARC investment for projects in General Goal 2.

This ratio sets a goal for non-ARC matching project funds. Ratios showing the amount of ARC funding to other project investment sources help illustrate the impact ARC's relatively small, flexible grants can have in the Appalachian Region.

3) *Targeting Measure:* The percentage of nonhighway ARC funds used for projects that benefit distressed counties or areas.

Program Category Three: Infrastructure. The following measures are presented in General Goal 3.

1) *Outcome Measure:* The number of households served.

Infrastructure projects measured in this category include general water and/or sewer projects. "Households served" encompasses the number of households with either new or improved service.

2) *Matching Measure:* The ratio of non-ARC to ARC investment for projects in General Goal 3.

This ratio sets a goal for non-ARC matching project funds. Ratios showing the amount of ARC funding to other project investment sources help illustrate the impact ARC's relatively small, flexible grants can have in the Appalachian Region.

3) *Targeting Measure:* The percentage of nonhighway ARC funds used for projects that benefit distressed counties or areas.

Program Category Four: Highways. The following measure is presented in General Goal 4.

Outcome Measure: The net increase in the number of miles of the Appalachian Development Highway System (ADHS) open to traffic.

Progress on the ADHS is measured by the net increase in the number of miles open to traffic each year. ARC also prepares a separate annual report, *Status of the Appalachian Development Highway System*, which provides detailed information on the portions of highways moving through the various stages of work in each Appalachian state, as well as an analysis of funding and remaining work.

Intermediate Results

Intermediate results presented in this report are derived from estimates in project applications, as reported by grantees. When projects are closed, actual results to date are recorded; however, some estimates are based on three-year projections. More accurate results are obtained when ARC staff validate a sample of projects two to three years after initial funding. The validity of final numbers is sampled during periodic project evaluations (see page 46).

Data Analysis

Critical data from projects submitted to ARC for funding are entered into the Commission's management information system, ARC.net, to facilitate monitoring of projects. At quarterly intervals throughout the fiscal year, ARC staff review performance measurement data in ARC.net to better understand emerging trends, improve data integrity, and shape policy to improve the ARC programs. At the close of each fiscal year, ARC staff review results and prepare the data for submission to OMB and Congress.

ARC Performance Measurement Framework
Fiscal Year 2008

	JOBS AND INCOME	COMPETITIVENESS	INFRASTRUCTURE	HIGHWAYS
Program Category	JOBS AND INCOME	COMPETITIVENESS	INFRASTRUCTURE	HIGHWAYS
Six-Year Goals	**Increase job opportunities and per capita income in Appalachia to reach parity with the nation.** **Outcome Goal 2005–2010:** Create or retain 120,000 jobs.	**Strengthen the capacity of the people of Appalachia to compete in the global economy.** **Outcome Goal 2005–2010:** Provide 120,000 Appalachian citizens with enhanced education/skills.	**Develop and improve Appalachia's infrastructure to make the Region economically competitive.** **Outcome Goal 2005–2010:** Provide new or improved water/sewer services to 120,000 households.	**Build the Appalachian Development Highway System to reduce Appalachia's isolation.** **Outcome Goal 2005–2010:** Open 150 additional miles (net increase) of the ADHS to traffic.
FY 2008 Goals	***Performance Goals*** **Outcome Goal:** Create or retain 20,000 jobs for Appalachians. **Leveraging Goal:** Achieve a 4:1 ratio of leveraged private investment (non-project investment) to ARC project funding. **Targeting Goal:** Direct 50% of grant funds to projects that benefit distressed counties or areas.	***Performance Goals*** **Outcome Goal:** Position 20,000 Appalachians for enhanced employability. **Matching Goal:** Achieve a 1:1 ratio of non-ARC project funding to ARC project funding. **Targeting Goal:** Direct 50% of grant funds to projects that benefit distressed counties or areas.	***Performance Goals*** **Outcome Goal:** Provide 20,000 households with basic infrastructure services. **Matching Goal:** Achieve a 2:1 ratio of non-ARC project funding to ARC project funding. **Targeting Goal:** Direct 50% of grant funds to projects that benefit distressed counties or areas.	***Performance Goal*** **Outcome Goal:** Open 25 additional miles (net increase) of the ADHS to traffic.
Input and Activities	**Key Strategies and Activities:** Promote economic diversification through advocacy, regional forums, information sharing, training, and cooperative funding. Target entrepreneurship development and business support.	**Key Strategies and Activities:** Increase employability by identifying and replicating exemplary projects, expanding alliances with other organizations, and providing funding leadership. Focus on college-going rates, worker skills, science/math education, school readiness, and high school completion rates. Address health access issues.	**Key Strategies and Activities:** Seek highly leveraged and collaborative funding for basic infrastructure projects, emphasizing clean water and waste disposal. Expand telecommunications infrastructure through advocacy, knowledge sharing, and targeted funding.	**Key Strategy:** Work to complete the ADHS in close cooperation with state and federal partners as Highway Trust Fund financing becomes available.

Project Validation

Staff validation visits, confirming actual project outcomes, have become a critical part of ARC's GPRA compliance. As a general rule, in each fiscal year ARC validates the outcomes of 40 to 60 projects funded two to three years earlier. The two- or three-year lag allows time for most projects to be completed, resulting in a more accurate sampling of outcomes.

The validation visits performed by ARC staff yield far more than project outcomes. Grantees are asked a series of questions aimed at providing insight into why their projects were or were not successful in reaching their stated outcomes. This feedback allows ARC to better understand the consequences of its programming and make policy or procedural changes as the need arises.

In situations where a project failed to meet proposed goals, ARC staff consider mitigating circumstances and look for possible trends in an effort to assist other projects faced with similar challenges. Likewise, when a project has exceeded proposed goals, ARC staff attempt to determine why. Analyses from the validation visits are compiled in an annual internal report.

Project Evaluations: Final Results

Another critical component of ARC's GPRA compliance is independent or external evaluation of ARC initiatives and sub-programs. Evaluations confirm both the outcomes and the overall effectiveness of projects. Evaluations focus on the extent to which the projects have achieved, or contributed to the attainment of, their objectives. Particular emphasis is placed on assessing the utility and validity of the outcome measures. The findings of these project evaluations are summarized and made available to state and local organizations engaged in carrying out projects under the four general goals in ARC's strategic plan, and are typically published on ARC's Web site. Summaries of recent evaluations are included in this report under each general goal area.

GENERAL GOAL 1: INCREASE JOB OPPORTUNITIES AND PER CAPITA INCOME IN APPALACHIA TO REACH PARITY WITH THE NATION.

In partnership with other agencies, ARC will help local and state leaders diversify local economies, support entrepreneurship, increase domestic and global markets, and foster new technologies in order to address job shifts throughout the Region. In addition, ARC will encourage local leaders to build on the opportunities presented by Appalachian Development Highway System corridors and to examine natural, cultural, structural, and leadership assets that can create job opportunities while preserving the character of the Region's communities.

Strategic Objective 1.1: Foster Civic Entrepreneurship. This objective supports selected strategies including broad-based leadership, collaboration, partnerships, regional initiatives, strategic planning, training, and consultation.

Strategic Objective 1.2: Diversify the Economic Base. This objective supports selected strategies including development of new businesses and products, modernization and strengthening of existing businesses and their workforce, and increasing awareness of available economic development tools.

Strategic Objective 1.3: Enhance Entrepreneurial Activity in the Region. This objective supports selected strategies including access to investment capital, entrepreneurship training, and technical assistance for businesses.

Strategic Objective 1.4: Develop and Market Strategic Assets for Local Economies. This objective supports selected strategies including identifying local and regional assets, creating strategies for local businesses to capitalize on these assets, and specifically maximizing economic benefits of heritage tourism and craft industries.

Strategic Objective 1.5: Increase the Domestic and Global Competitiveness of the Existing Economic Base. This objective supports selected strategies including research in global and domestic development, aiding small businesses in connecting to national and global markets, and promoting foreign investment in the Region.

Strategic Objective 1.6: Foster the Development and Use of Innovative Technologies. This objective supports selected strategies including expansion and creation of high-tech operations and research, increased support for public-sector science and technology programs, and commercialization of new technologies.

Strategic Objective 1.7: Capitalize on the Economic Potential of the Appalachian Development Highway System. This objective supports selected strategies including strategic planning and development initiatives along completed and future sections of the ADHS, and promoting cooperation between highway and economic development officials.

Per Capita Income

While ARC sets a performance goal for increasing job opportunities in Appalachia, addressing increases in per capita income resulting directly from specific projects is much more difficult. For this reason, ARC depends on tracking trends in per capita market income, as well as on census poverty measures and comparisons between the Appalachian Region and the nation.

ARC uses an index-based county economic classification system to identify and monitor the economic status of Appalachian counties. The system compares each county in the nation with national averages on three economic indicators: three-year average unemployment rates, per capita market income, and poverty rates. Each county is then ranked, and each Appalachian county is classified in one of five economic status designations—distressed, at-risk, transitional, competitive, or attainment—based on its position in the national ranking.

- *Distressed counties* are those that rank in the worst 10 percent of the nation's counties.
- *At-Risk counties* rank between the worst 10 percent and the worst 25 percent of the nation's counties.
- *Transitional counties* rank between the worst 25 percent and the best 25 percent of the nation's counties.
- *Competitive counties* rank between the best 10 percent and the best 25 percent of the nation's counties.
- *Attainment counties* are those that rank in the best 10 percent of the nation's counties.

In FY 2008, 78 counties were designated distressed, 78 were designated at-risk, 226 were designated transitional, 22 were designated competitive, and 6 were designated attainment.

Performance Goals and Results

General Goal 1 is aligned with the annual performance goals listed under the program category "jobs and income." (See page 45.)

Outcome Goal

ARC's strategic plan describes the major outcome measure for the "jobs and income" program category as the number of jobs created or retained. Because General Goal 1 is most closely aligned with the annual performance goals listed under the "jobs and income" program category, results for "jobs and income" projects from General Goals 1, 2, and 3 are reported under this goal. "Jobs created or retained" is an outcome measure under all three goals. This measure is referred to as "jobs created/retained."

Annual outcome goal for FY 2008: Create/retain 20,000 jobs for Appalachians.

Results for FY 2008: Exceeded goal.

Outcome Goal: Create/Retain 20,000 Jobs for Appalachians	
ANNUAL OUTCOME GOAL	INTERMEDIATE ESTIMATES
FY 2005: 20,000 Jobs Created/Retained	FY 2005: 19,346 Jobs Created/Retained
FY 2006: 20,000 Jobs Created/Retained	FY 2006: 28,866 Jobs Created/Retained
FY 2007: 20,000 Jobs Created/Retained	FY 2007: 28,642 Jobs Created/Retained
FY 2008: 20,000 Jobs Created/Retained	**FY 2008: 35,292 Jobs Created/Retained**

Leveraging Goal

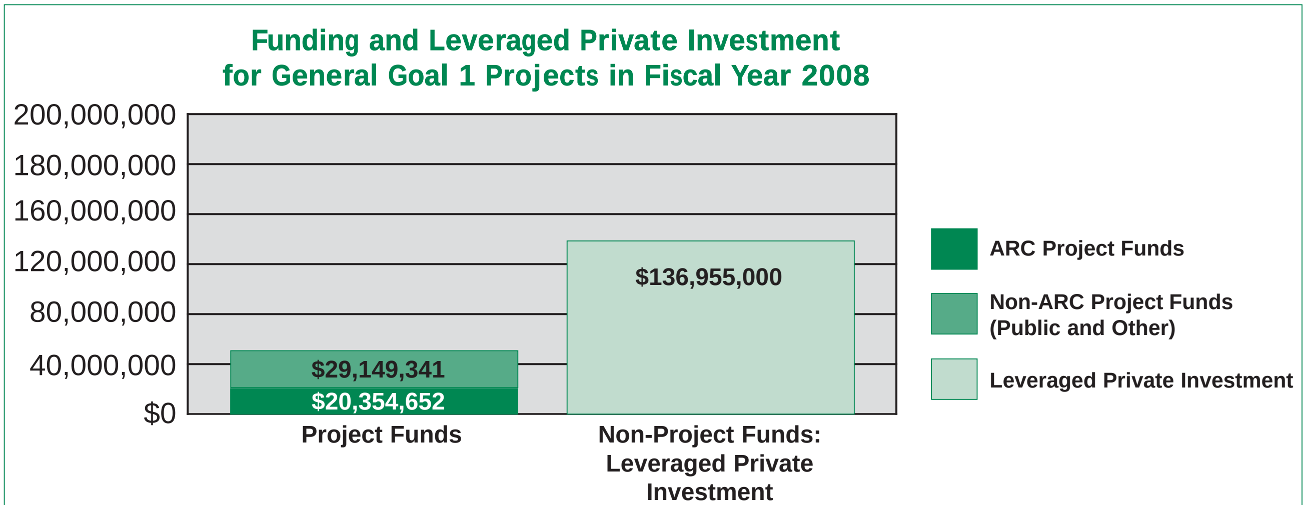
The leveraging performance goal for General Goal 1 projects is a ratio of leveraged private investment to ARC investment.

Annual leveraging goal for FY 2008: Achieve a 4:1 ratio of leveraged private investment to ARC investment.

Results for FY 2008: Exceeded goal.

Leveraging Goal: Achieve a 4:1 Ratio of Leveraged Private Investment to ARC Investment	
ANNUAL LEVERAGING GOAL	INTERMEDIATE ESTIMATES
FY 2005: Achieve a 4:1 ratio of leveraged private investment to ARC investment.	**FY 2005:** Achieved a 7:1 ratio.
FY 2006: Achieve a 4:1 ratio of leveraged private investment to ARC investment.	**FY 2006:** Achieved a 7:1 ratio.
FY 2007: Achieve a 4:1 ratio of leveraged private investment to ARC investment.	**FY 2007:** Achieved a 10:1 ratio.
FY 2008: Achieve a 4:1 ratio of leveraged private investment to ARC investment.	**FY 2008:** Achieved a 7:1 ratio.

In FY 2008, ARC's General Goal 1 grant funds of $20,354,652 attracted non-project leveraged private investment of $136,955,000, and $29,149,341 in matching project funds from public and other sources.



Targeting Goal

The targeting performance goal for General Goal 1 projects is the percentage of funds targeted to distressed counties or areas.

Annual targeting goal for FY 2008: Direct 50 percent of all ARC grant funds to projects that benefit distressed counties or areas.

Results for FY 2008: In FY 2008, 60 percent of all ARC nonhighway project funds were directed to projects that benefit distressed counties or areas. ARC tracks the percentage of funds targeted to distressed counties separately in General Goals 1, 2, and 3 for management purposes only.

Targeting Goal: Direct 50 Percent of General Goal 1 Grant Funds to Distressed Counties or Areas

ANNUAL TARGETING GOAL	INTERMEDIATE ESTIMATES*
FY 2005: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2005:** Directed 45% of General Goal 1 funds.
FY 2006: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2006:** Directed 46% of General Goal 1 funds.
FY 2007: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2007:** Directed 45% of General Goal 1 funds.
FY 2008: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2008:** Directed 49% of General Goal 1 funds.

** Includes projects that primarily benefit distressed counties or areas, and projects where most beneficiaries of the project are in distressed counties or areas.*

Project Validation Sampling

In FY 2008, members of ARC's field validation team surveyed twenty-four FY 2005 and FY 2006 projects with goals for jobs created/retained to compare estimated and actual results.

Number of Projects Surveyed	Projected Number of Jobs Created/Retained	Actual Number of Jobs Created/Retained	Results Achieved
24	2,629	3,036	115%

As shown above, the projects surveyed achieved 115 percent of projected results for jobs created/retained.

Project Evaluation: Final Results

Entrepreneurship

In FY 2008, the Appalachian Regional Commission issued the report *Creating an Entrepreneurial Appalachian Region: Findings and Lessons from an Evaluation of the ARC's Entrepreneurship Initiative 1997–2005*, prepared by the Rural Policy Research Institute (RUPRI), the RUPRI Center for Rural Entrepreneurship, EntreWorks Consulting, and RTI International. The report evaluated ARC's Entrepreneurship Initiative (EI) in terms of both outcomes achieved by a sample of funded projects and broader policy impacts across the Region.

As identified through project final reports submitted to ARC, the EI led to the creation of at least 9,156 jobs, the retention of a further 3,022 jobs, the formation of 1,787 new businesses, and the provision of services to 8,242 businesses. The cost per job created was $4,693, which compares favorably with other economic development efforts.

From 1997 to 2005, the EI made investments in 340 unique projects across the Region at an average investment of $3.3 million per state and a per capita investment of $1.82. The EI investment in projects that were completed as of 2005 leveraged an additional $72.8 million in private investment. When all the projects in the study have been completed, the leveraging figure is expected to rise to $109.9 million.

A sample of 88 projects was selected for in-depth investigation of outcomes. Additional metrics were reported for these projects, including the following: more than 11,500 students and teachers participated in or received training in entrepreneurship education projects; 1,500 entrepreneurs took part in sector-focused activities; and another 1,620 entrepreneurs received training and technical assistance.

The evaluation team assessed the qualitative impacts of the sample projects through interviews with project leaders familiar with the investments, and from regional stakeholders and entrepreneurship experts with deep experience both in the Region and in entrepreneurship development. Common themes identified were that ARC EI investments

- raised the profile of entrepreneurship as a development strategy in the Region;
- provided start-up funding for innovative projects;
- leveraged additional resources that helped some projects achieve scale and impact;
- facilitated networking and collaboration among practitioners; and
- helped change attitudes, particularly among youths and their teachers.

The evaluation team offered three sets of recommendations for ARC:

- Entrepreneurship development initiatives should include assessments of existing capacity and capacity-building activities as part of the project design; they should be designed with a focus on the long term; they should be market driven and practice continuous improvement; and they should emphasize forming regional partnerships and collaborations.

- The use of job creation as the sole performance measurement for entrepreneurship development investments paints an incomplete picture of the outcomes, and should be replaced by a set of metrics designed for entrepreneurship projects.

- ARC's "regional initiative" process should be regularized so that state program managers can more effectively plan for and promote the use of the resources; ARC should apply its proven experience to developing and delivering effective, regionwide education programs that help make the case for entrepreneurship as a core economic development strategy; and ARC should invest long-term in a "next generation entrepreneurship innovation initiative" using lessons learned from the original EI and building on its momentum.

Tourism and Asset-Based Development

In FY 2007, Regional Technology Strategies (RTS) undertook a program evaluation of ARC's tourism, cultural heritage, and asset-based development projects. The evaluation will verify project outcomes and assess the utility and validity of specific performance measurements for monitoring and evaluating these types of projects; and will identify future policy options, reporting concerns, and lessons learned. RTS has completed examinations of approximately 100 tourism, cultural heritage, and asset-based development projects through surveys, interviews with ARC staff and stakeholders in the 13 Appalachian states, and visits to selected sites. A draft report of the evaluation will be completed in 2009.

Capacity Building

In FY 2004, the Appalachian Regional Commission issued the report *Evaluation of the Appalachian Regional Commission's Community Capacity–Building Projects*, prepared by the Westat Corporation. The purpose of the evaluation was to assess factors associated with successful capacity–building projects and to recommend a range of performance measures that could be used to document the impact of successful initiatives. One hundred projects were examined in the study, all of which were funded by ARC between 1995 and 2003. Total ARC funding for the projects was roughly $7 million. The report's evaluation includes both quantitative and qualitative findings on outcomes, based on multiple sources (i.e., documentary evidence, interviews, and case studies) and incorporated lessons learned about community capacity building, including studies conducted by various foundations, private nonprofits, academic researchers, and federal agencies. Findings of the study are summarized below.

Findings: Most (70 percent) of the 179 outcomes proposed by interviewed projects were successfully achieved. Of the remaining outcomes, 9 percent had not been achieved, 10 percent were still open, and 11 percent lacked information on attainment.

Recommendations: ARC application materials for community capacity–building projects should provide information and examples to help applicants execute and document their approach and outcomes more accurately; ARC should work more closely with applicants during this process. In addition, ARC should provide grantees with written materials on data collection and analysis practices.

GENERAL GOAL 2: STRENGTHEN THE CAPACITY OF THE PEOPLE OF APPALACHIA TO COMPETE IN THE GLOBAL ECONOMY.

ARC will continue to support local efforts to make all of the Region's citizens productive participants in the global economy. The Commission's focus will be to address a range of educational issues, such as workforce skills, early childhood education, dropout prevention, and improved college attendance; and health issues, such as the recruitment and retention of health-care professionals in areas with documented shortages and the promotion of better health through wellness and prevention measures. In addition, ARC will develop partnerships with other organizations to address the high incidence of life-threatening diseases in the Region.

Strategic Objective 2.1: Foster Civic Entrepreneurship. This objective supports selected strategies that include collaboration between businesses and training institutions, youth civic education and participation, and community dialogue on local health issues.

Strategic Objective 2.2: Enhance Workforce Skills through Training. This objective supports selected strategies including new and innovative workforce training and vocational education, and modernization and expansion of existing programs.

Strategic Objective 2.3: Increase Access to Quality Child Care and Early Childhood Education. This objective supports selected strategies including access to, and expansion of, early childhood education programs, and access to quality child care.

Strategic Objective 2.4: Increase Educational Attainment and Achievement. This objective supports selected strategies including preparation for post-secondary-level training, expansion of the Appalachian Higher Education Network, and programs for dropout prevention and increasing the college-going rate.

Strategic Objective 2.5: Provide Access to Health-Care Professionals. This objective supports selected strategies including access to health-care programs, the J-1 Visa Waiver Program, health-care professional training programs, and primary-care systems.

Strategic Objective 2.6: Promote Health through Wellness and Prevention. This objective supports selected strategies including promotion of nutrition, physical activity, and early screening; and programs that promote healthy lifestyles, and help eliminate drug and/or alcohol abuse.

Performance Goals and Results

General Goal 2 is aligned with the annual performance goals listed under the program category “competitiveness.” (See page 45.)

Outcome Goal

The outcome goal for the “competitiveness” program category is the number of citizens in the Region that have been positioned for enhanced employability through education or job-related skills. The outcome measure for this goal is students/trainees with improvements. Because General Goal 2 is most closely aligned with the annual performance goals listed under the “competitiveness” program category, results for “competitiveness” projects from General Goals 1, 2, and 3 are reported under this goal. “Competitiveness” is an outcome measure under all three goals. This outcome measure combines the measures “students with improvements” and “workers/trainees with improvements,” and is referred to as “students/trainees with improvements.”

Annual outcome goal for FY 2008: Position 20,000 Appalachians for enhanced employability.

Results for FY 2008: Exceeded goal.

Outcome Goal: Position 20,000 Appalachians for Enhanced Employability	
ANNUAL OUTCOME GOAL	INTERMEDIATE ESTIMATES
FY 2005: 20,000 Students/Trainees with Improvements	FY 2005: 27,652 Students/Trainees with Improvements
FY 2006: 20,000 Students/Trainees with Improvements	FY 2006: 17,578 Students/Trainees with Improvements
FY 2007: 20,000 Students/Trainees with Improvements	FY 2007: 20,876 Students/Trainees with Improvements
FY 2008: 20,000 Students/Trainees with Improvements	**FY 2008: 20,432 Students/Trainees with Improvements**

Matching Goal

The matching performance goal for General Goal 2 projects is the ratio of non-ARC project matching funds to ARC investment.

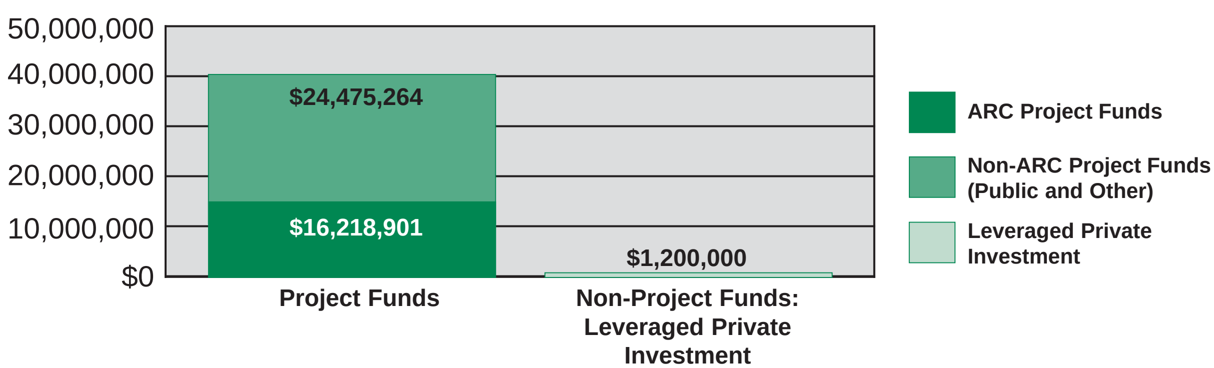
Annual matching goal for FY 2008: Achieve a 1:1 ratio of non-ARC matching funds to ARC investment.

Results for FY 2008: Exceeded goal.

Matching Goal: Achieve a 1:1 Ratio of Non-ARC Matching Project Funds to ARC Investment	
ANNUAL MATCHING GOAL	**INTERMEDIATE ESTIMATES**
FY 2005: Achieve a 1:1 ratio of non-ARC matching project funds to ARC investment.	**FY 2005:** Achieved a 2:1 ratio.
FY 2006: Achieve a 1:1 ratio of non-ARC matching project funds to ARC investment.	**FY 2006:** Achieved a 2:1 ratio.
FY 2007: Achieve a 1:1 ratio of non-ARC matching project funds to ARC investment.	**FY 2007:** Achieved a 2:1 ratio.
FY 2008: Achieve a 1:1 ratio of non-ARC matching project funds to ARC investment.	**FY 2008:** Achieved a 2:1 ratio.

In FY 2008, ARC General Goal 2 grant funds of $16,218,901 attracted $24,475,264 in matching project funds from public and other sources and $1,200,000 in non-project leveraged private investment.

Funding and Leveraged Private Investment for General Goal 2 Projects in Fiscal Year 2008



Targeting Goal

The targeting performance goal for General Goal 2 projects is the percentage of funds targeted to distressed counties or areas.

Annual targeting goal for FY 2008: Direct 50 percent of all ARC grant funds to projects that benefit distressed counties or areas.

Results for FY 2008: In FY 2008, 60 percent of all ARC nonhighway project funds were directed to projects that benefit distressed counties or areas. ARC tracks the percentage of funds targeted to distressed counties separately in General Goals 1, 2, and 3 for management purposes only.

Targeting Goal: Direct 50 Percent of General Goal 2 Grant Funds to Distressed Counties or Areas	
ANNUAL TARGETING GOAL	INTERMEDIATE ESTIMATES*
FY 2005: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2005:** Directed 60% of General Goal 2 funds.
FY 2006: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2006:** Directed 71% of General Goal 2 funds.
FY 2007: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2007:** Directed 75% of General Goal 2 funds.
FY 2008: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2008:** Directed 66% of General Goal 2 funds.

** Includes projects that primarily benefit distressed counties or areas, and projects where most beneficiaries of the project are in distressed counties or areas.*

Project Validation Sampling

In FY 2008, members of ARC's field validation team surveyed twenty-five FY 2005 and FY 2006 projects funded under General Goal 2 to compare estimated and actual results.

Number of Projects Surveyed	Projected Number of Students/Trainees with Improvements	Actual Number of Students/Trainees with Improvements	Results Achieved
25	8,315	19,046	229%

As shown above, the projects achieved 229 percent of projected results for students/trainees with improvements.

Project Evaluation: Final Results

Vocational Education and Workforce Training

In FY 2002, the Appalachian Regional Commission issued the report *Evaluation of the Appalachian Regional Commission's Vocational Education and Workforce Training Projects*, prepared by the Westat Corporation. The study examined 92 projects started and completed during the 1995–2000 period. This sample constituted about one-third of the project universe during the period, after adjusting for continuation projects. A mail survey collected data on project implementation, monitoring, and impact. In addition, five case study site visits were conducted. A two-tier sample of projects was developed to assess the impact before and after full implementation of ARC's performance measurement system in FY 2000. Tier 1 selected 67 projects from the 1995–1999 period; Tier 2 selected 25 projects funded in 2000.

Types of Performance Measured

- Skills obtained; e.g., projects helped participants improve basic skills, academic skills, vocational skills, or employability habits.
- Individual employment gains; e.g., projects helped laid-off workers or underemployed workers obtain new work; helped those without full-time job experience gain initial full-time jobs; helped employed individuals increase skills, responsibilities, wages, and position.

Project Outcomes

- Forty-five percent of the Tier 1 (1995–1999) projects achieved all of their objectives; 27 percent achieved all but one objective.
- Only 9 percent (six projects) achieved fewer than half of their objectives.
- The vast majority of projects had quantifiable outcome measurements, but a higher proportion of the Tier 2 (2000) projects had clear and quantifiable outcomes.

Education

A March 2006 evaluation of the ARC–Oak Ridge National Laboratory Math-Science-Technology Summer Institute by the Academy for Educational Development assessed the effectiveness of the program in encouraging more Appalachian high school students to continue their studies beyond high school and to pursue careers in science, technology, engineering, and math. It also assessed how the program helped participating high school teachers raise the level of math, science, and technology instruction in their schools. The findings are based on data collected from eight groups of participants attending the summer institute between 1997 and 2004.

The study found that participation in the summer institute influenced 24 percent of students to take more science classes and 22 percent to take more math classes when they returned to high school. Slightly more than half the students reported that their summer institute experience reinforced prior decisions about the science and math courses they had already chosen to take. Students also reported that the summer institute had reinforced their intention to go to college and reduced some of the barriers. Ninety-six percent of the student participants who had graduated from high school at the time of the survey had continued their formal education beyond high school, with more than half receiving degrees in science, technology, engineering, or math fields. Of the 23 students who attended the institute in 1997 and 1998, all reported attending college: 26 percent had attended college but had not earned a bachelor’s degree, 39 percent had earned a bachelor’s degree, and 35 percent had earned a bachelor’s degree and begun graduate work.

Participating teachers reported that they had incorporated activities and approaches learned at the summer institute into their classrooms: 77 percent reported that they drew on the experience for explanations and examples; 52 percent reported that they drew on the experience for classroom demonstrations; and 50 percent reported that they had incorporated new knowledge into their lab experiments.

In fiscal year 2001, ARC issued the report *Evaluation of the Appalachian Regional Commission’s Educational Projects*, by the Westat Corporation, which assessed the implementation and impact of 84 education projects funded by ARC during the 1990s. The study examined the type of activities projects used to enhance learning opportunities, the extent to which these activities were implemented, the accomplishments associated with these activities, and whether or not the projects were able to sustain themselves beyond the ARC grant period. Of particular interest was the extent to which projects achieved the outcomes set forth in their original proposals to ARC. In addition, site visits were conducted at eight projects that had successfully provided community residents with a new or enhanced educational service.

Types of Performance Measured

- Increased educational attainment; e.g., increased high school completion rates, increased college-going rates.
- Increased economic well-being; e.g., improved job skills, increased wages.
- Increased family/individual well-being; e.g., improved family stability.
- Reduced barriers; e.g., decreased student behavior problems, increased access to educational support.

Project Outcomes

Study findings indicate that most of the projects in the study reached those segments of Appalachia that are most economically disadvantaged or geographically isolated. Most projects were successful in achieving or exceeding the outcomes they set forth in their original requests for ARC support (just under half met expectations and nearly one-third achieved more than planned). Thirteen percent achieved less than planned.

College-Going Rates

In FY 2007, the University of Kentucky completed a report on college-going and perseverance rates in Appalachia that analyzed school-level data on college-going rates and college-going plans for schools participating in the Appalachian Higher Education (AHE) Network, and for non-participating schools in peer counties in the same Appalachian states. In addition, it examined national evaluations of similar programs in order to benchmark regional outcomes. The findings show that AHE Network results mirror national trends. It should be noted that privacy concerns prevented the contractors from being able to conduct student-level analysis.

ARC launched the AHE Network in 1999 to raise the levels of educational attainment in Appalachia. The network provides funding, training, and assistance to participating high schools for programs to encourage students to obtain a post-secondary education. From 2000 to 2007, more than 36,500 high school seniors were served by AHE Network centers. In FY 2008, centers operated in Georgia, Kentucky, Mississippi, North Carolina, Ohio, Tennessee, Virginia, and West Virginia.

GENERAL GOAL 3: DEVELOP AND IMPROVE APPALACHIA'S INFRASTRUCTURE TO MAKE THE REGION ECONOMICALLY COMPETITIVE.

ARC will address the lack of adequate water and sewer systems and telecommunications systems and services in the Region, and will build partnerships to address the critical issue of intermodal connections to improve access to global markets.

Strategic Objective 3.1: Foster Civic Entrepreneurship. This objective supports selected strategies including building capacity to address infrastructure challenges, partnerships and regional efforts, local community infrastructure projects, and strategic planning for capitalizing on ADHS economic development opportunities.

Strategic Objective 3.2: Build and Enhance Basic Infrastructure. This objective supports selected strategies including strategic investments to leverage other funding for water and wastewater systems and expansion of safe, affordable housing stock.

Strategic Objective 3.3: Increase the Accessibility and Use of Telecommunications Technology. This objective supports selected strategies including strategic telecommunications infrastructure, information technology training, e-commerce, telemedicine, and combining telecommunications development with other public infrastructure development.

Strategic Objective 3.4: Build and Enhance Environmental Assets. This objective supports selected strategies including brownfield redevelopment in industrial areas and redevelopment of mine-impacted land, eco-industrial development, and planning and development policies promoting good stewardship of natural resources.

Strategic Objective 3.5: Promote the Development of an Intermodal Transportation Network. This objective supports selected strategies including intermodal economic development studies, inland port location analysis, regional forums, and organizational development to support intermodal connectivity.

Performance Goals and Results

General Goal 3 is aligned with the annual performance goals listed under the program category “infrastructure.” (See page 45.) All projects with these annual performance goals are in General Goal 3.

Outcome Goal

The strategic plan describes the performance measure for the “infrastructure” program category as the number of citizens served. The major outcome measure used in this category is the number of households served with new or improved water or sewer infrastructure. The outcome measure for General Goal 3 projects is referred to as “households served.”

Annual outcome goal for FY 2008: Provide 20,000 households with basic infrastructure services.

Results for FY 2008: Exceeded goal. In addition to the numbers recorded below, ARC in FY 2008 funded water storage tank construction and improvement projects that will serve a total of 10,587 households.

Outcome Goal: Provide 20,000 Households with Basic Infrastructure Services	
ANNUAL OUTCOME GOAL	INTERMEDIATE ESTIMATES*
FY 2005: 20,000 Households Served	FY 2005: 21,255 Households Served
FY 2006: 20,000 Households Served	FY 2006: 30,148 Households Served
FY 2007: 20,000 Households Served	FY 2007: 23,107 Households Served
FY 2008: 20,000 Households Served	**FY 2008: 21,538 Households Served**

**Intermediate estimates do not include households served by ARC-funded water storage tank construction and improvement projects.*

Matching Goal

The matching performance goal for General Goal 3 projects is the ratio of non-ARC project matching funds to ARC investment.

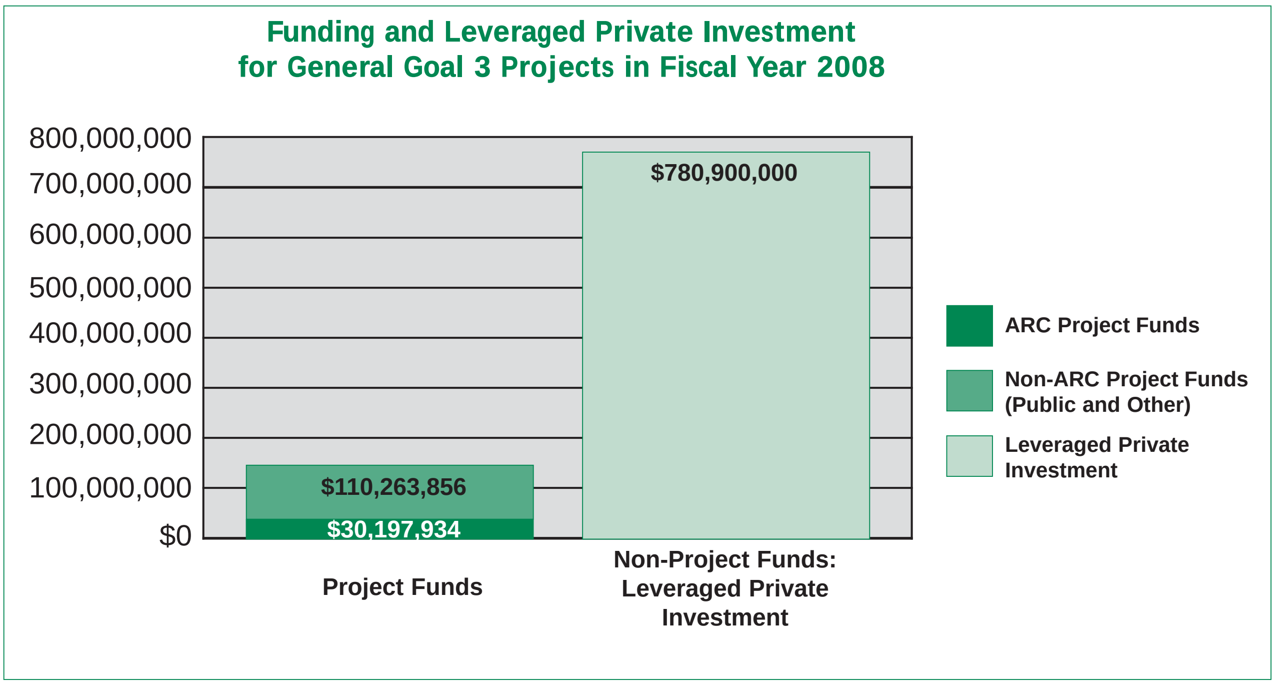
Annual matching goal for FY 2008: Achieve a 2:1 ratio of non-ARC matching funds to ARC investment.

Results for FY 2008: Exceeded goal.

Matching Goal: Achieve a 2:1 Ratio of Non-ARC Matching Project Funds to ARC Investment	
ANNUAL MATCHING GOAL	INTERMEDIATE ESTIMATES
FY 2005: Achieve a 2:1 ratio of non-ARC matching project funds to ARC investment.	**FY 2005:** Achieved a 4:1 ratio.
FY 2006: Achieve a 2:1 ratio of non-ARC matching project funds to ARC investment.	**FY 2006:** Achieved a 5:1 ratio.
FY 2007: Achieve a 2:1 ratio of non-ARC matching project funds to ARC investment.	**FY 2007:** Achieved a 5:1 ratio.*
FY 2008: Achieve a 2:1 ratio of non-ARC matching project funds to ARC investment.	**FY 2008:** Achieved a 4:1 ratio.

** Three large-scale projects that had limited ARC participation were not included in the calculations for this ratio.*

ARC FY 2008 General Goal 3 grant funds of $30,197,934 attracted $110,263,856 in matching project funds from public and other sources, and $780,900,000 in non-project leveraged private investment.



Targeting Goal

The targeting performance goal for General Goal 3 projects is the percentage of funds targeted to distressed counties or areas.

Annual targeting goal for FY 2008: Direct 50 percent of all ARC grant funds to projects that benefit distressed counties or areas.

Results for FY 2008: In FY 2008, 60 percent of all ARC nonhighway project funds were directed to projects that benefit distressed counties or areas. ARC tracks the percentage of funds targeted to distressed counties separately in General Goals 1, 2, and 3 for management purposes only.

Targeting Goal: Direct 50 Percent of General Goal 3 Grant Funds to Distressed Counties or Areas	
ANNUAL TARGETING GOAL	INTERMEDIATE ESTIMATES*
FY 2005: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2005:** Directed 63% of General Goal 3 funds.
FY 2006: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2006:** Directed 70% of General Goal 3 funds.
FY 2007: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2007:** Directed 65% of General Goal 3 funds.
FY 2008: Direct 50% of grant funds to projects that benefit distressed counties or areas.	**FY 2008:** Directed 64% of General Goal 3 funds.

** Includes projects that primarily benefit distressed counties or areas, and projects where most beneficiaries of the project are in distressed counties or areas.*

Project Validation Sampling

In FY 2008, members of ARC's field validation team surveyed eight FY 2005 and FY 2006 projects funded under General Goal 3 to compare estimated and actual results.

Number of Projects Surveyed	Projected Number of Households Served	Actual Number of Households Served	Results Achieved
8	16,066	15,923	99%

The projects surveyed achieved 99 percent of projected results for households served. The performance goal was set at an approximate target level, and the deviation from that level was slight. There was no effect on overall performance.

Project Evaluation: Final Results

Infrastructure and Public Works

In FY 2007, the Brandow Company and Economic Development Research Group completed the ARC report *Evaluation of the Appalachian Regional Commission's Infrastructure and Public Works Program Projects, 2006*. The evaluation examined a sample of 104 completed ARC infrastructure projects that had been funded between 1998 and 2004, including industrial parks and other industrial sites, access roads, business incubators, water and sewer systems, housing, and telecommunications. The sample projects represent 25 percent of the completed infrastructure projects that had been funded during this period. Of the 104 projects sampled, 78 were non-residential economic development projects; 22 were community development projects, including residential water and sewer projects; and four were housing projects. The number of infrastructure projects funded during this period accounted for about 49 percent of ARC area development projects.

Findings of the evaluation included the following:

- *Jobs.* The sampled projects, which received $29.4 million in ARC funding, directly produced 17,795 new jobs and retained 9,580. In addition, an estimated 25,341 new jobs were created by the indirect effects of the project. ARC funds created an average of one new direct job for every $1,652 of ARC investment. On average, industrial parks created 1,086 jobs per project; commercial water and sewer improvements created 304 jobs per project; business incubators created 271 jobs per project; telecommunications created 230 jobs per project; and access roads created 212 new jobs per project.

- *Personal Income.* The new jobs created or retained by these projects led to an increase of $638 million annually in new wages for the jobs created directly by the projects, $325 million annually in wages for retained jobs, and another $692 million in wages from indirect jobs.

- *Tax Revenue.* The new projects yield $13.3 million per year in state income tax revenue, $16.5 million per year in state and local sales tax revenue, and $14.2 million per year in local property tax revenue. The total of annual state income tax and local property tax revenue almost equals the amount of the ARC investment.

- *Private Investment.* The new projects have leveraged total private-sector investment of $1.7 billion: $947 million in direct private non-project investment and $753 million in induced non-project private investment.

Water and Sewer Infrastructure Gaps Study

In August 2005, ARC issued the report *Drinking Water and Wastewater Infrastructure in Appalachia: An Analysis of Capital Funding and Funding Gaps* by the University of North Carolina Environmental Finance Center. This report analyzes the conditions of water and wastewater services in the Appalachian Region and attempts to assess the financial requirements and strategies available to improve the quality of drinking water and wastewater services in the Region, particularly in the areas that face chronic economic distress and clear deficiencies in these services. The analyses are based on major data sources compiled by the Environmental Protection Agency (EPA), the U.S. Geological Survey, and the U.S. Census Bureau, as well as private credit-rating agencies. In addition, detailed case studies are developed to examine specific community-level services, issues, and practices.

The analysis shows that, on average, community water systems in distressed counties have greater needs per person served ($497) than systems in non-distressed counties ($191–$353). Based on an analysis of EPA needs-survey data, communities in Appalachia report approximately $26 billion in water and wastewater infrastructure needs. However, there is ample evidence that communities will actually have to pay far more than this to ensure services that meet basic public health and environmental standards since the estimate does not include the additional funds needed to address operation and maintenance costs or the thousands of substandard and failing individual wells and on-site sanitation systems (septic systems to straight pipes). Including these other factors could raise the total capital needs to the range of $35 billion to $40 billion.

The study also demonstrates that needs identified by the EPA's *Clean Watersheds Needs Survey* were significantly and positively related to the distribution of water and wastewater infrastructure funding in Appalachia. The relationship between funding distributions and National Pollutant Discharge Elimination System compliance violations was significant and positive. Likewise, the relationships between funding distributions and waterborne diseases were significant and positive. The relationship between septic system density and funding, although significant, was negative; on average, counties with higher densities of septic systems received less public funding than counties with lower densities of septic systems. This latter finding is likely attributable to a fundamental characteristic of infrastructure funding: it tends to flow to communities with existing large public systems.

GENERAL GOAL 4: BUILD THE APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM TO REDUCE APPALACHIA'S ISOLATION.

Some of the Region's most persistent economic problems stem from geographic isolation brought about by mountainous terrain. The Appalachian Development Highway System (ADHS) was designed to connect Appalachia to the national interstate system and provide access to areas within the Region as well as to markets in the rest of the nation. The strong partnership of ARC, the U.S. Department of Transportation (U.S. DOT), and state departments of transportation will continue to oversee the planning and construction of the Appalachian Development Highway System. ARC will work to identify and overcome barriers to the timely completion of the ADHS.

Strategic Objective 4.1: Foster Civic Entrepreneurship. This objective supports selected strategies including local and multi-jurisdictional forums to reduce barriers to completion of the ADHS and collaboration among state departments of transportation, the U.S. DOT, and other state and federal agencies involved in economic development.

Strategic Objective 4.2: Promote On-Schedule Completion of the ADHS. This objective supports selected strategies including working with federal and state DOTs to identify and overcome barriers in the location-study and design phases, supporting efforts to obligate the maximum amount of the annual appropriation for ADHS construction, accelerating construction of final phases, and promoting development that preserves cultural and natural resources of the Region while enhancing economic opportunity.

Strategic Objective 4.3: Coordinate Work on ADHS State-Line Crossings. This objective supports selected strategies including coordination of technical information, funding disbursements, and construction scheduling between adjoining states to complete state-line crossings of ADHS corridors.

Performance Goal and Results

General Goal 4 is aligned with the annual performance goal listed under the program category "highways." (See page 45.)

Outcome Goal

The strategic plan describes the outcome measure in the program category "highways" as the net increase in the number of miles of the ADHS open to traffic. The outcome measure for General Goal 4 projects is referred to as "net increase in the number of miles of the ADHS open to traffic."

Annual outcome goal for FY 2008: Open 25 additional miles (net increase) of the ADHS to traffic.

Result for FY 2008: Exceeded goal. At the end of FY 2008, a total of 2,574.9 miles, or 83.3 percent, of the 3,090 miles authorized for the ADHS were open to traffic, and 97.5 more were under construction. Another 138.7 miles were in the final design or right-of-way acquisition phase, and 279.0 miles were in the location study phase.

Outcome Goal: Open 25 Additional Miles (Net Increase) of the ADHS to Traffic	
ANNUAL OUTCOME GOAL	INTERMEDIATE ESTIMATES
FY 2005: Open 25 additional miles (net increase) of the ADHS to traffic.	**FY 2005:** Opened 19.3 additional miles (net increase) of the ADHS to traffic.
FY 2006: Open 25 additional miles (net increase) of the ADHS to traffic.	**FY 2006:** Opened 30.8 additional miles (net increase) of the ADHS to traffic.
FY 2007: Open 25 additional miles (net increase) of the ADHS to traffic.	**FY 2007:** Opened 11.1 additional miles (net increase) of the ADHS to traffic.
FY 2008: Open 25 additional miles (net increase) of the ADHS to traffic.	**FY 2008:** Opened 35.5 additional miles (net increase) of the ADHS to traffic.

Project Validation Sampling

The ADHS program is not funded through ARC's appropriation. Therefore, ARC validation visits are not performed on the ADHS. Instead, ARC staff prepare a status report each year on the development of the ADHS based on information from the Federal Highway Administration and state departments of transportation.

Project Evaluation: Final Results

ADHS Economic Impact

In October 2006, Economic Development Research Group completed the study *The Impact of Highway Investments on Economic Growth in the Appalachian Region, 1969–2000: An Update and Extension of the Twin County Study*. The report updated the 1995 "twin county" study by Andrew Isserman and Terance Rephann, which found statistically significant differences in economic growth rates between Appalachian counties and their non-Appalachian counterparts during the years 1965 to 1991, and also found that counties served by the Appalachian Development Highway System had higher rates of income, population, and per-capita income growth than similar non-Appalachian counties. The new study extended the analysis to the year 2000 and assessed whether the amount, characteristics, and timing of ADHS investments can explain some of the differences in economic outcomes. The study, which used survey-based data, showed that there is a robust statistical link between ADHS investments and differential income and earnings growth between Appalachian counties and similar non-Appalachian counties.

A key finding of the study was that Appalachian counties with open ADHS segments had higher income growth than their twin counties, with the ADHS counties posting 200 percent more income growth over the 1969–2000 period. In comparison, income growth for all Appalachian counties during the period was 131 percent higher than income growth in the non-Appalachian twin counties.

The overall performance during this period of the Appalachian counties studied, however, should not mask the struggles that some areas of the Region have experienced: performance of the northern Appalachian counties lagged behind the non-Appalachian twins', and, across the Region, the performance of smaller metropolitan areas fell far behind their non-Appalachian counterparts'.

In 1998, ARC published a research report undertaken by Wilbur Smith Associates to conduct a comprehensive study of the economic benefits of the ADHS. *Appalachian Development Highways Economic Impact Studies* focused on the contributions of completed portions of 12 corridors within the highway system. The portions studied totaled 1,417.8 miles and traversed 165 counties. The objective of the study was to quantify regionally specific economic development impacts (as measured by jobs, wages, and value added) as well as impacts on travel efficiencies. The study found that the completed sections of the 12 corridors had created jobs (an estimated net increase of 16,000 jobs by 1995) and showed a solid return on investment ($1.18 in travel-efficiency benefits and $1.32 in economic benefits gained for each dollar invested in construction and maintenance). The study concluded that the ADHS can take credit for highway-related growth in Appalachia and demonstrated that the completed portions of the ADHS have been a good investment.

In FY 2008, Cambridge Systematics completed a report on the economic impact of completing the Appalachian Development Highway System. The work included building a regional travel demand model to estimate travel demands, as well as user benefits, that would be realized by the completion of ADHS corridors and the resulting network improvements in moving goods and people to, from, within, and across the Region. Analysts estimated user benefits for freight, commuting, tourism, and other business and non-business traffic; then, using these data, estimated the regional economic development benefits from the enhanced competitive position of industry in the Region, increased roadside business and tourism, increased transportation reliability, and increased commuting areas, as well as national benefits due to congestion relief. The study also developed several types of benefit-cost assessments, including an overall assessment of regional travel efficiency and economic development benefits, as well as national efficiency benefits.

SUMMARY OF ACHIEVEMENTS

Performance Goals and Results for Fiscal Year 2008 Projects

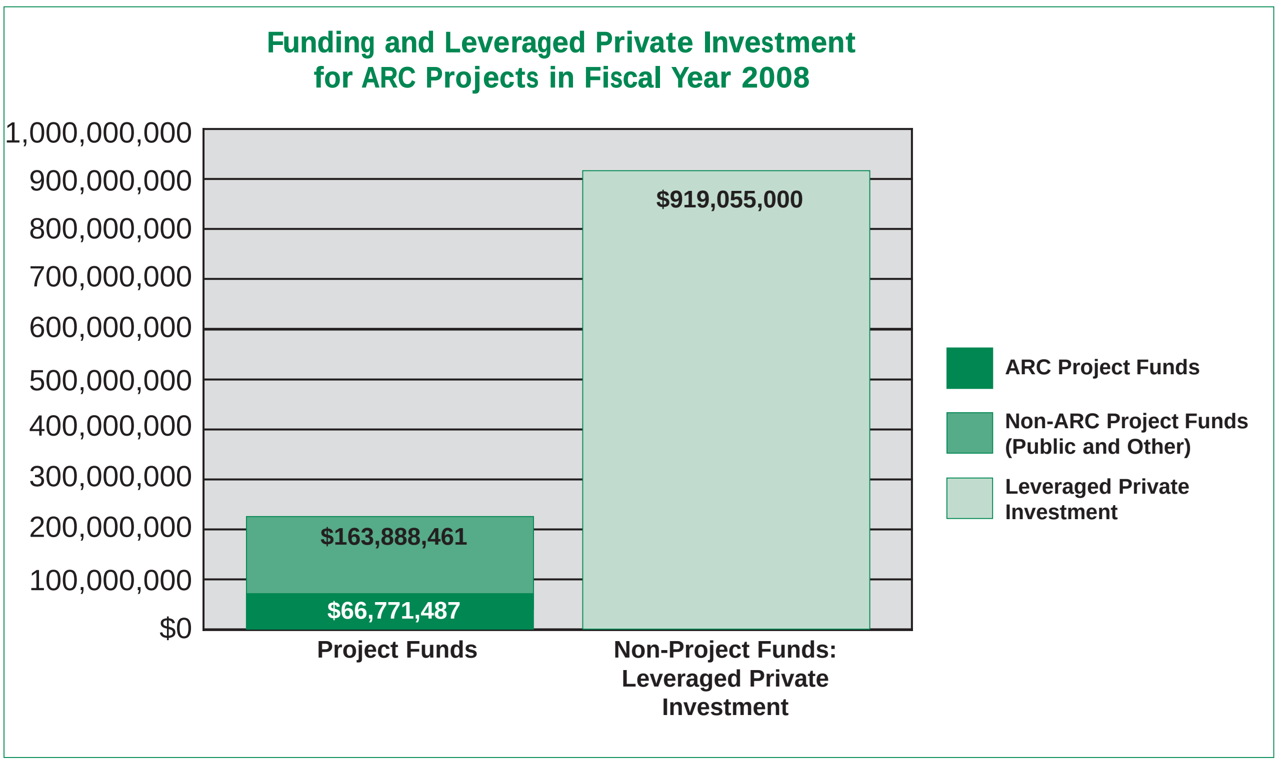
ANNUAL PERFORMANCE GOALS	FISCAL YEAR 2008 INTERMEDIATE ESTIMATES	RESULTS ACHIEVED
Jobs and Income		
Outcome Goal: 20,000 jobs created or retained	35,292 jobs created or retained	Exceeded goal
Leveraging Goal: Achieve a 4:1 ratio of leveraged private investment to ARC investment for projects in General Goal 1	Achieved a 7:1 ratio	Exceeded goal
Targeting Goal: Direct 50% of grant funds to benefit distressed counties or areas for projects in General Goal 1	Directed 49% of funds*	Met 98% of goal
Competitiveness		
Outcome Goal: 20,000 students/ trainees with improvements	20,432 students/trainees with improvements	Exceeded goal
Matching Goal: Achieve a 1:1 ratio of non-ARC to ARC investment for projects in General Goal 2	Achieved a 2:1 ratio	Exceeded goal
Targeting Goal: Direct 50% of grant funds to benefit distressed counties or areas for projects in General Goal 2	Directed 66% of funds*	Exceeded goal
Infrastructure		
Outcome Goal: 20,000 households served	21,538 households served	Exceeded goal
Matching Goal: Achieve a 2:1 ratio of non-ARC to ARC investment for projects in General Goal 3	Achieved a 4:1 ratio	Exceeded goal
Targeting Goal: Direct 50% of grant funds to benefit distressed counties or areas for projects in General Goal 3	Directed 64% of funds*	Exceeded goal
Highways		
Outcome Goal: 25 additional miles (net increase) of the ADHS opened to traffic	Opened 35.5 additional miles (net increase) of the ADHS to traffic	Exceeded goal

** ARC exceeded its overall goal of investing 50% of total ARC nonhighway funds in projects that benefit distressed counties or areas. Project funds are included if the project* primarily or substantially *benefits distressed counties or areas.*

Investment Summary for FY 2008 Projects

LEVERAGING, MATCHING, AND TARGETING SUMMARY for All ARC Nonhighway Projects Fiscal Year 2008		
Leveraged private investment	$919,055,000	14:1 ratio of leveraged private investment to ARC investment
Non-ARC matching project funds	$163,888,461	2:1 ratio of non-ARC project investment to ARC project investment
ARC project funds targeted to distressed counties or areas	$39,971,359*	60% of total ARC project funds directed to projects that benefit distressed counties or areas*

**Project funds are included if the project* primarily *or* substantially *benefits distressed counties or areas.*



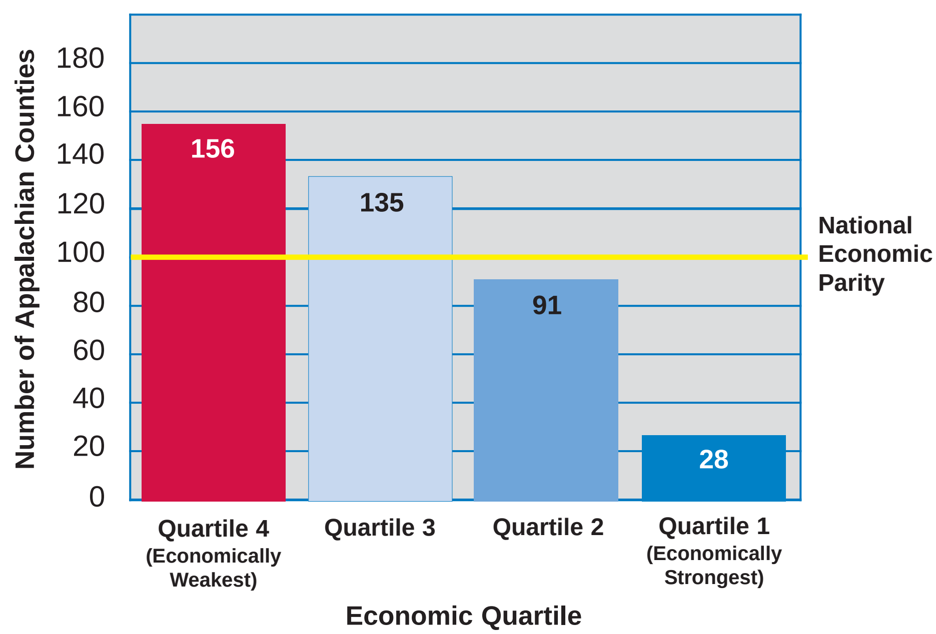
MEASURING PROGRESS TOWARD THE ARC VISION

ARC's overall vision for Appalachia is for the Region to achieve socioeconomic parity with the nation. One way to measure progress of the Region toward this vision is to look at the economic status of Appalachian counties in comparison with all counties nationwide.

In order to provide a single unified measure of regional progress and economic change, ARC developed an index to track improvement over time. Drawing on the three variables ARC uses annually to determine the economic status of the Region's 410 counties, staff developed a national composite index of distress. The three variables (three-year annual unemployment, per-capita market income, and decennial poverty rates) are applied to each county in the nation and compared with national averages. The resulting values are summed, averaged, and ranked to create four quartiles with approximately equal number of counties in each group.

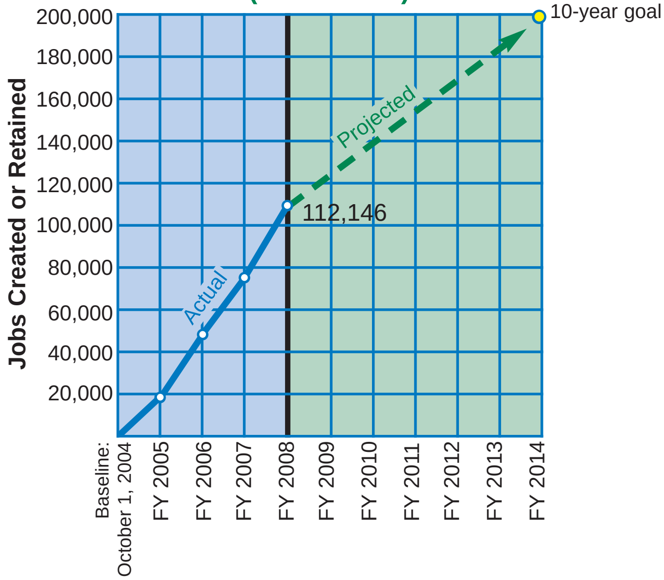
Using this index, ARC can compute annually the number of Appalachian counties in each quartile, as well as an overall regional index value. This can be directly compared with the national index value to measure progress. In addition, progress can be clearly measured by reductions in the number of Appalachian counties in the worst quartile. As the figure below shows, despite a large reduction in the number of distressed counties in Appalachia over the past several years, the Region continues to have a disproportionately high number of counties with underperforming economies and a smaller share of counties with strong economies, compared with the rest of the nation.

Number of Appalachian Counties by Economic Quartile, Fiscal Year 2008



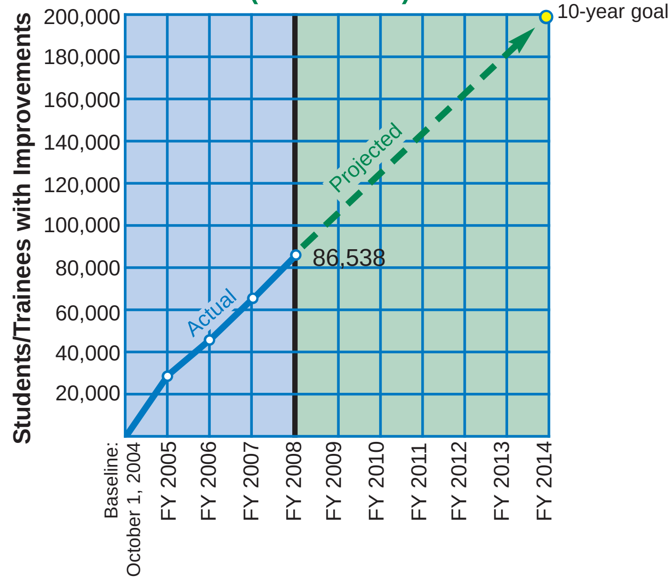
Progress toward ARC Strategic Plan Ten-Year Performance Goals
Fiscal Years 2005–2014

Goal 1: Jobs Created or Retained (Cumulative)



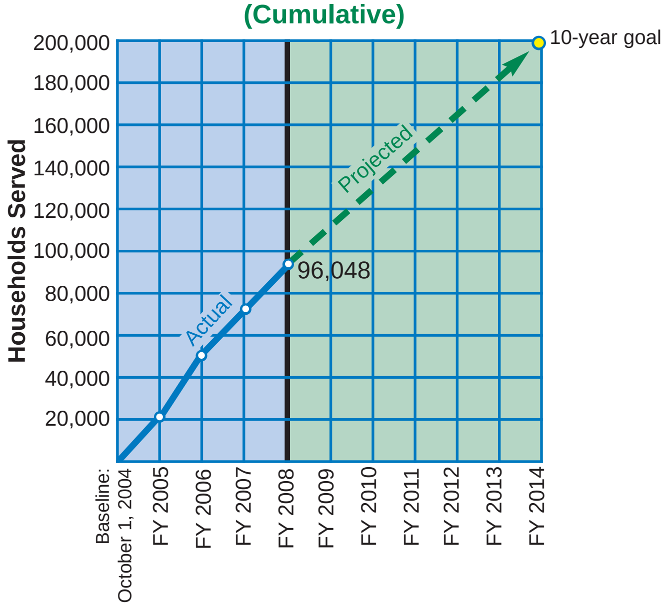
Ten-Year Performance Goal:
200,000 jobs will be created or retained.

Goal 2: Students/Trainees with Improvements (Cumulative)



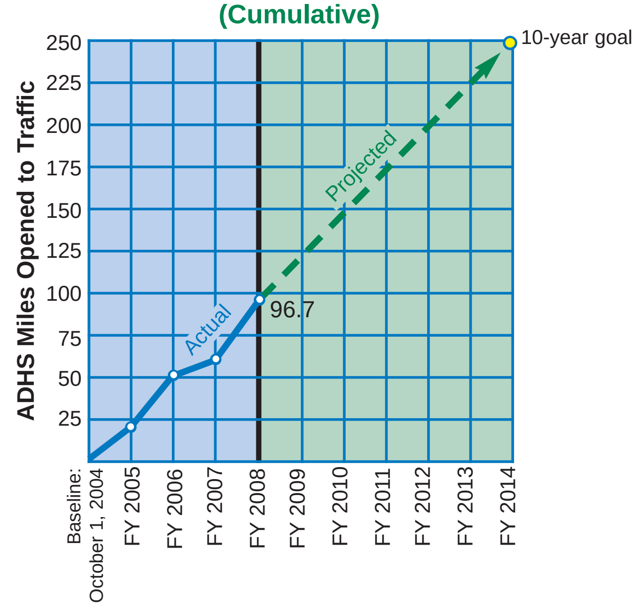
Ten-Year Performance Goal:
200,000 citizens will benefit from enhanced education and job-related skills.

Goal 3: Households Served (Cumulative)



Ten-Year Performance Goal:
200,000 households will be served with new or improved water and sewer infrastructure.

Goal 4: ADHS Miles Opened to Traffic (Cumulative)



Ten-Year Performance Goal:
250 additional miles (net increase) of the Appalachian Development Highway System will be opened to traffic.