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Program Evaluation of the Appalachian Regional Commission's Job Creation and Retention Projects

DEVELOPED FOR THE
Appalachian Regional Commission

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1 Executive Summary

Report Highlights

This report presents the approach and findings from an evaluation of ARC grants awarded between FY 2004 and FY2010 in support of job creation or retention efforts.

Methodology

The 286 Job Creation and Retention Grant recipients from FY 2004 to FY 2010 provided information on their initial grant application regarding expectations for various outcome measures, including jobs and businesses created and retained, and leveraged private investment. The evaluation of program success was conducted using data obtained through a combination of surveys and case studies. Survey responses were received from all Appalachian Regional Commission (ARC) states and each of the defined project types, though not all were equally represented. Grantees from Pennsylvania provided the most responses of any state, in part due to the Enterprise Development Programs. Business/Training projects were the most frequently funded and generated the most responses of any project type. Fifteen case studies were selected based on notable approaches and results. Case studies represent each project category and 10 of 13 Appalachian states. Additional insight into future program focus was provided by discussions with rural policy experts.

Findings

Overall, the 123 survey response demographics were consistent with the full ARC.net demographics. The largest share of the \$42.5 million funding went to Pennsylvania. Business/Training was the most heavily represented project type. ARC funding supported projects that created and retained jobs and businesses in excess of their initial predictions. Excluding Enterprise Development Program impacts, survey respondents indicated:

- 5,964 jobs created or retained as compared to predictions of 3,766.
- 2,698 businesses created or served, exceeding the initial projections of 166.
- Leveraged private investment of \$216.8 million, \$179.5 million more than initial expectations.

Qualitatively, respondents indicated that ARC funding had a successful impact on economic measures, meeting the target of the program funding.

Lessons Learned

- Engage, educate and involve the community.
- Change is good – be flexible.
- Mind your measures.
- Fine-tune the grant process.

Recommendations for Future Programs

- Improve the data collection and tracking process.
- Clarify and specify measurement metrics and timing.
- Collect additional information related to funding sources.
- Consider targeted investment and focus on key growth industries.
- Increase focus on workforce training.
- Support local leadership.
- Consider additional assistance or resources for program administrators.

1.1 Evaluation Overview

ARC investments fund locally developed projects or programs to assist the localities in establishing, supporting, and maintaining businesses. The purpose of these grants is to enhance economic development through a variety of avenues with the hope of meeting the Commission's goals.

The Appalachian Regional Commission has four main goals, as laid out in the 2011-2016 Strategic Plan:

1. Increase job opportunities and per capita income in Appalachia to reach parity with the nation.
2. Strengthen the capacity of the people of Appalachia to compete in the global economy.
3. Develop and improve Appalachia's infrastructure to make the Region economically competitive.
4. Build the Appalachian Development Highway System to reduce Appalachia's isolation.

The performance of ARC's job creation and retention investments is closely related to these goals, particularly the first two, and this program evaluation intends to assess the performance and economic impacts of these investments between FY 2004 and FY 2010. In addition, the evaluation offers insight into ways that ARC can enhance its ability to document and report program impacts, as well as assess potential industries or improvements to help improve rural areas in the Region.

The primary purpose of this study is to determine the extent to which ARC's funding of job creation and retention projects has contributed to the achievement of ARC's economic development objectives, as outlined in its strategic plan. The evaluation seeks to assess the allocation, impact and cost-effectiveness of the program through correlations between types of projects, levels of funding and real project outcomes. The evaluation also aims to provide recommendations to aid the Commission in optimizing future investments.

Overall, the findings of the study suggest that the grant program is successful in achieving many of ARC's economic development goals, but there is room for improvement, particularly in the areas of data collection and monitoring. The remainder of the Executive Summary provides an overview of the study's findings and provides some recommendations for enhancing the evaluation process.

1.2 Program Evaluation Review

The first stage of the project was to review program evaluation methodologies implemented both in previous ARC Program Evaluations and measures used by other agencies to determine the approach best suited for this study. The review discussed 13 different evaluation methods and also detailed five past reports and program evaluations from ARC and other government agencies.

The strengths and weaknesses of each evaluation approach, and their applicability to ARC's job creation and retention program evaluation, were summarized. To determine

the best approach for this evaluation, the qualities of each method were rated against criteria to determine the approaches best suited for this particular evaluation. The comparison matrix is presented in Table ES-1 below. Using information gathered from the review of evaluation methods and past studies, the team ultimately recommended using a combination of surveys and case studies to complete this program evaluation.

Table ES-1: Rating of Approaches and Methods against Criteria

Criteria							
Approaches & Methods	Ease of Use for ARC	Ease of Interpretation	Flexibility	Data Availability	Estimation of Counterfactual	Transparency	Acceptance & Credibility
Surveys	★★★★	★★★★	★★★	★★★	No	★★★★	★★★★
Observations or Site Visits	★★★	★★★	★★	★★	No	★★★★	★★★★
Analysis of Experimental Data	★	★★	★★	★	Yes	★★★★	★★★★★
Before & After Comparisons	★★	★★	★★★★	★★	No	★★	★★
Theory Based Evaluation & Modeling	★★★	★★	★	★	Sometime	★★	★★★
Case Studies	★★★	★★★★★	★★★★★	★★★	Generally Not	★★	★★★
Application of Findings from Other Studies	★★	★★	★	★	No	★★	★
Use of Expert Opinion	★★	★★★★	★★★★	★★★★	Not Explicitly	★★	★★
Statistical Analysis and Use of Causal Models	★★	★★	★★	★	Sometime	★★★★	★★★★
Input-Output Modeling	★★★	★★★	★★★★	★★★★★	No	★★	★★★★★
Benefit-Cost Analysis	★★	★★★★	★★★★	★★	Yes, Needed	★★★★	★★★★
Sensitivity Analysis or Risk Analysis	★★★	★★	★★★★	★★	N/A	★★★★	★★★★

1.3 Performance Measure Database

Once the evaluation approach was determined, the project team examined the ARC.net database of the 286 job creation and retention projects funded by ARC between FY 2004 and FY 2010. The projects considered in this evaluation cover a wide range of categories and project types. Some project types were underrepresented in the ARC.net database. The project team worked together with ARC to aggregate some of the more similar projects together to provide larger sample sizes in each of the six defined categories. After the project categories were agreed upon, a survey was designed to collect supplemental information regarding the project outputs and outcomes.

Several steps were taken in an effort to generate the highest possible response survey rate. These include testing a draft survey on select grantees, distribution to the grantees both electronically and by mail, and extensive follow-up with non-responsive grantees. In the end, of the 286 program grantees, the team received 123 responses with sufficient information to analyze. There were a total of 138 survey responses, but 15 were either blank or duplicates, and were thus excluded.

The information gathered from the survey responses was appended to the ARC.net database to analyze the reported outputs and outcomes associated with the funded projects. Responses were received from all 13 Appalachian states. Pennsylvania accounted for the largest number of responses, 41 of the 123, or 33.3 percent. The large number of projects funded and responses in Pennsylvania is at least partially due to the 50 Enterprise Development Program grants funded during this time period.

In terms of project types, Business/Training projects were the most heavily represented both in the full database and in the survey responses. Seventy of the 144 Business/Training projects responded to the survey, accounting for 56.9 percent of all responses received. In general, the demographic composition of the survey responses was consistent with that of the full database.

From FY 2004 to FY 2010, ARC contributed \$42.5 million to these 286 projects. The survey responses accounted for approximately half, or \$20.5 million, of this funding. The long-running Enterprise Development Programs account for \$17.8 million of the \$42.5 million in total funding during this period; these projects accounted for approximately half of the funding value of survey responses.

1.3.1 Data Analysis

The performance measure database included information on 123 projects from all 13 Appalachian states and each of the six project types. One of the primary goals of the evaluation was to assess the economic development impacts, such as jobs created or retained and businesses created or retained. Overall, based on the survey results for which sufficient data were available, ARC job creation and retention investments created or retained more than 237,000 jobs, primarily driven by the Enterprise Development Program projects. The Pennsylvania Enterprise Development Programs contributed approximately 51,000 jobs created and 176,000 retained.

The 123 survey responses showed that projects that received ARC funding between FY 2004 and FY 2010 contributed to the creation of 776 business establishments, and the retention of 3,427 businesses, as shown in Table ES-2 below. As with jobs, much of this

is attributable to the Enterprise Development Programs – 430 businesses created and 2,884 businesses retained. Finally, the \$20.5 million that ARC contributed to the programs that responded to the survey leveraged an additional \$422.7 million in private investments.

Table ES- 2: Key Project Outcomes, All Project Types

Project Type	Jobs Created	Jobs Retained	Businesses Created	Businesses Retained	Leveraged Private Investment (\$ millions)
Business/Training	58,158	177,688	668	3,093	\$362.3
Child Care/Education	48	43	25	48	\$2.4
Community Building/Tourism	193	561	14	6	\$30.8
Energy/Environmental	348	39	23	5	\$9.1
Local Food	169	548	32	271	\$0.7
Planning/Research	111	19	14	4	\$17.5
Total	59,026	178,897	776	3,427	\$422.7

Source: Survey response data

1.4 Case Studies of Best Practices

In addition to the survey, the project team conducted case studies of 15 projects that had notable results and approaches. The case studies are representative of each of the project types and all but three of the Appalachian states. These projects were identified through review of the survey data and discussions with ARC program staff. These programs created jobs, generated income and other quantitative outcomes, accompanying qualitative impacts, and policy implications for Appalachian residents and businesses. They enhanced economic development by attracting new industry, encouraging business expansion, diversifying local economies, and generating permanent, private-sector jobs.

The case studies focused on project planning and implementation, economic and community impacts, and lessons learned for communities undertaking similar projects in the future. The table below presents basic information on each of the 15 case studies, with details presented in Chapter 6.



Table ES- 3: Case Study Overview¹

	Grantee	Project Title (Grant Number)	Project Description	Project Type	Year	ARC Funds	Total Funds	Primary Outcomes
6.1	The Conservation Fund	Capacity building for Asset-Based Economies in Western North Carolina (NC-16686-I)	To develop local Asset-Based projects through a series of training workshop and hands-on technical assistance.	Planning / Research	2010	\$100,000	\$229,700	17 jobs created
6.2	University of Alabama	University of AL Export Trade Financing Program (EXTRA) (AL-15573-C3)	Continuing support for a program that addresses access to technical assistance and finances in export marketing.	Business / Training	2010	\$151,125	\$302,250	92 jobs created; \$6.7 million LPI
6.3	City of Toccoa	Toccoa Downtown Revitalization Project (GA-15259-I)	Revitalize the historic downtown business district.	Community Building / Tourism	2005	\$300,000	\$1,400,000	1,100 jobs retained
6.4	Mountain Empire Community College	Mountain Empire Alternative Energy Initiative (CO-16396-I)	Develop a career Studies Certificate to articulate with an Energy Management Associate Degree program.	Child Care / Education	2009	\$40,000	\$82,386	
6.5	The Progress Fund	Great Allegheny Passage Economic Development Program (MD-16055-I)	To coordinate the Trail Town Program in the Maryland communities	Business / Training	2008	\$100,000	\$200,000	76 jobs created; 17 new businesses created
6.6	Round the Mountain Southwest VA Artisan Network	Heartwood: Southwest VA Artisan Gateway (VA-16005-I)	For state-of-the-art iconography interior exhibits, media presentations, furnishing and equipment at The Heartwood: Southwest Virginia's Artisan Gateway	Business / Training	2008	\$1,000,000	\$2,058,140	

¹ Note that the Mountain Empire Alternative Energy Initiative (6.4) did not directly have any reportable job or business creation impacts, though there have been 24 students enrolled in the program. Additionally, the Heartwood Southwest VA Artisan Gateway (6.6) does not have easily isolated impacts, and thus none have been noted in the table.

	Grantee	Project Title (Grant Number)	Project Description	Project Type	Year	ARC Funds	Total Funds	Primary Outcomes
6.7	Marketing Association for Rehabilitation Centers (MARC)	MARC Custom Medical Products (NC-15696-I)	A program to develop manufacturing capacity to produce custom medical drapes and other products and generate funds for development programs for people with disabilities	Business / Training	2007	\$200,000	\$883,400	162 jobs created; 150 jobs retained; \$2.7 million LPI
6.8	Ohio State University Research Foundation	Strengthening Appalachia's Farmers' Markets (OH-16104-I)	To provide low- and no-cost marketing and promotional strategies and templates for Appalachian Ohio farmers' markets.	Local Food	2008	\$75,000	\$150,157	75 jobs retained
6.9	Cornell Cooperative Extension of Tompkins	Finger Lakes Reuse Center Start-up (NY-16085-I)	To launch the Finger Lakes Reuse Center.	Business / Training	2008	\$148,463	\$300,444	9 jobs created
6.10	North Carolina REAL Enterprises, INC	Expanding Entrepreneurship in Appalachia – REAL Entrepreneurship Curriculum Improvement (NC-15807-I)	To revise the REAL Enterprise curriculum to include new technologies, more financial literacy, and information about emerging industry clusters and train new faculty.	Business / Training	2007	\$82,600	\$205,350	90 jobs created; 90 new businesses created
6.11	Northeastern Pennsylvania Alliance	Northeastern PA Alliance Enterprise Development (PA-8291-C29)	Project will continue small business financing, international business development assistance, procurement technical assistance, support of PA Source Net and other e-commerce activities.	Business / Training	2010	\$400,000	\$800,000	169 jobs created; 640 jobs retained



	Grantee	Project Title (Grant Number)	Project Description	Project Type	Year	ARC Funds	Total Funds	Primary Outcomes
6.12	Land-of-Sky Regional Council	Building the Clean Energy Economy in Western North Carolina (NC-16543-I)	Activities to support the growth of a clean energy economy in Western North Carolina	Energy / Environmental	2010	\$100,000	\$200,000	9 jobs created; 173 new businesses created
6.13	West Virginia High Technology Consortium Foundation	WV High Technology Consortium Foundation INNOVA Commercialization Technical Assistance (WV-15262-I)	Continuing support for an early-stage investment fund linked to a range of technical assistance efforts.	Business / Training	2005	\$125,000	\$250,000	22 jobs created
6.14	Kentucky Highlands Investment Corporation	Kentucky Highlands Energy Business Boot Camp (CO-15789-I)	To develop and Energy Business Boot Camp, providing intensive performance-based entrepreneurial training and mentoring to growing firms.	Energy / Environmental	2007	\$75,000	\$225,000	15 jobs created
6.15	North Carolina Department of Commerce	FY 2010-2011 Wood Products/Home Furnishings Initiative (CO-15268-I)	To assist companies in North Carolina and other states in the Appalachian Region export wood products, manufacturing supplies and home furnishing.	Business / Training	2010	\$25,000	\$75,000	Floor sales = \$200,000; Expected sales = \$8.5 million

1.5 Rural Policy Interviews

Beyond the survey and case studies, the project team also conducted interviews with 18 rural policy and development experts to provide context to the findings and gain insight into and understanding of key development challenges, desired outcomes, and potential solutions to best meet the goals of ARC and the Region.

Discussions focused on three main themes: key challenges for rural communities in the United States, particularly in Appalachia; target industries for the Region; and how to measure success of investments in rural communities. A few of the experts were also asked about the role of funders in Appalachian economic development.

The discussions indicated three main challenges for the Region: lack of leadership and vision for future development; lack of stable, well-paying jobs; and a reduction in investment in rural regions and their development. These challenges have been relatively consistent over time, though funding has been decreasing in the recent past.

Emerging challenges include a lack of broadband infrastructure and worker skills to handle rapidly changing technology.

Experts identified several industries and job sectors to target for future growth, though they noted that the specific industries will depend on the specific characteristics and assets of each community. Some potential industries include: shale gas fracking and other clean energy production; farming and food supply; tourism and hospitality; manufacturing; healthcare administration; retail and services; and ecological services.

The experts have acknowledged that ARC has been successful at determining the needs of rural communities and making investments to try to meet those needs. They identified two main areas of improvement for measuring the success of these investments: improvements to the process of evaluating success and improvement to the metrics used to measure these successes. The consensus was that a standard set of metrics for all projects is not ideal and a unique set of indicators that best fits the project should be agreed upon at the project onset. They also agreed that more qualitative measures should also be tracked. The timing of project tracking and success measurement is also variable depending on the investment type. Additional detail about the discussions, findings and recommendations is provided in Chapter 7.

1.6 Study Findings and Recommendations

The job creation and retention program evaluation examined the impact of investments on income, employment opportunities, job and business creation and retention, and other qualitative impacts. The evaluation considered all quantitative and qualitative outcomes of these investments to gauge the overall performance of the projects.

Business/Training projects were the most frequently and heavily funded project types. These projects also generated the most benefit in terms of job and business creation and retention. A large share of the success was driven by the Enterprise Development Programs, though Business/Training projects still accounted for most benefits even when the Enterprise Development Programs are excluded.

The survey responses indicated that grantees had a tendency to underestimate the job and business impacts of the investment on their area. Respondents also indicated that the funding they received contributed to success on qualitative economic and competitiveness measures, including jobs and sources of income, business sales, and the stability of the economy. Highlighting the importance of ARC funding, approximately 25 percent of the survey respondents indicated that without ARC's contributions, their project would not have been undertaken.

Though the results indicated general success and positive outputs and outcomes, the results of the survey, case studies, and policy discussions have led the project team to develop a list of lessons learned and several recommendations to increase the likelihood of future success. These recommendations are not meant to be a complete assessment of the program or its priorities, but are designed to support future success and help the Commission achieve its goals.

The “lessons learned” were identified through the survey and case studies and may help ARC and future grant recipients best leverage funding to maximize economic development outcomes:

- Engage, educate and involve the community.
- Change is good – be flexible.
- Mind your measures.
- Fine-tune the grant process.

The recommendations below are intended to improve the data collection process, the quality of the data used for program evaluation and success of localities within the Region.

Improve the data collection and tracking process. Despite thorough efforts at gathering data for these projects, the team was able to collect data for fewer projects than desired. In addition to difficulty tracking some grantees, many of those individuals contacted did not have data on the measured outputs and outcomes. Over the course of nearly 10 years, some of the grant recipients had previously collected this information but no longer had the records. Others simply did not track the outputs and outcomes.

Given the high priority of tangible, measured improvements to job opportunities and other measures of competitiveness, it is in the best interest of ARC to require tracking for reporting purposes. Tracking of the performance metrics that are deemed most important to ARC should be required. It is important not to penalize grant recipients should factors outside their control result in a lack of expected performance, but tracking and measuring these outputs and outcomes will help improve ARC's project prioritization and best utilize limited funds into the future. Informing the Local Development Districts of the importance of collecting and maintain performance metrics may be a first-step to improving overall data collection.

Clarify and specify measurement metrics and timing. Grant recipients and rural policy experts agreed that tracking and measurement of project outcomes was difficult and needed improvement. They suggested that ARC implement a standardized process for collecting, measuring, and regularly reporting the impact data on each investment. This can either be done by an outside resource or by grant applicants educated on the tracking and measurement process desired by ARC. At present, there is some confusion about the exact nature of each metric and how it should be measured and tracked.

Several additional metrics were suggested to supplement the standard job creation measures, including growth in household income and level of entrepreneurship in the culture. More qualitative measures of success are also necessary, as there are many "soft" outcomes, such as civic capacity, that are very important to communities but are not easily quantified. Rural policy experts suggested customizing the indicators for each project type, due to the wide variation in types and categories of investment.

The time period for outcomes also varies by project type, with some investments such as education programs, taking a longer period to reach their full impact. The tracking and measurement process should account for this.

Collect additional information related to funding sources. In many cases, ARC funds are not the only source of capital for these projects. Gaining a better understanding of all funding required to implement a project, as well as the sources of these funds, could provide useful insight to ARC. Understanding differences in funding sources and options for various job creation and retention programs may help target and prioritize future

investments. Additionally, tracking detail on leveraged private investment may be useful for other potential project investments where a variety of funding sources are more available. This may free some of ARC's limited available resources for those high-impact projects with more limited access to other funding sources may help ARC best utilize the limited available resources. A better understanding of the complete funding picture may be informative to ARC as future investments are considered.

Consider targeted investment and focus on key growth industries. Focusing some grant resources on potentially high-growth, high-paying industries within the region could lead to long-term gains in overall quality of life. The decline of coal mining has led to a reduction in high paying jobs in many parts of the Region. Focus on clean energy industries and other high-growth potential industries may help provide well-paying jobs for area residents while potentially reducing some of the "brain drain" that the region has experienced.

Increase focus on workforce training. Increase focus on both general workforce training and the means by which workers are trained. A focus on investment in workforce training for some higher-skilled jobs within existing and targeted industries, including healthcare and ecological services, could help increase per capita income in the Region. The way that workers are trained should also be examined. The rapid nature of technological improvements requires constant learning. Workforce training programs should provide guidance on continuous learning to best prepare area workers for long-term employment.

Support local leadership. One key to continued success in the region is an increased focus on leadership within the rural communities. Supporting local leadership can help promote long-term stability and growth in the Region. This support can help foster civic capacity investment and environmental protections in the longer-term. Strong local leadership may also help address two key challenges – access to well-paid, stable jobs and a lack of public funding in rural areas. Development plans and local leadership could provide rural areas with champions who can organize in an effort to secure additional funding.

Consider additional assistance or resources for program administrators. Feedback has indicated that the grant writing and tracking process can be burdensome to recipients. Several agencies noted that they had forgone potential funding for new projects due to the time and effort required in the grant writing process. Though it has the potential to be costly and divert resources from actually funding projects and programs, additional support or resources both during the grant writing process and during the monitoring of grants would be beneficial to grantees. Many of these rural communities are strapped for resources, and the time required to plan and monitor a grant is often be cumbersome. Providing additional resources may contribute to greater long-term success, as well as better data collection and performance monitoring.

2 Introduction

Appalachian Regional Commission (ARC) investments fund locally developed projects to assist localities in establishing and supporting private-sector businesses. ARC's job creation and retention grants are specifically designed to financially support these locally grown initiatives. The purpose of ARC's grants is to enhance economic development by attracting new industry, encouraging business expansion, diversifying local economies, and generating permanent, private-sector jobs. Non-infrastructure job creation and retention projects supported by ARC include business development and entrepreneurship, education and training, health care programs, and leadership development and civic capacity.

An evaluation of these non-infrastructure job creation and retention investments facilitates a better understanding of how to best distribute limited resources. Information gathered during this program evaluation supports accountable decision making going forward. To effectively evaluate these programs and the policy direction, an understanding of data-driven, performance-based business practices that link organizational goals and objectives to resources is required. Performance management has been used for more than a decade in various public works and policy fields, and over that time has evolved from a focus on identifying measures and tracking performance to using performance measures in decision-making.

This study aims to evaluate ARC funded projects that were focused on job creation and retention to assess whether or not the projects have achieved their stated goals. The evaluation also seeks to determine whether these projects have contributed to the strategic objectives of the Commission as planned. The study covers projects funded from FY 2004 to FY 2010 throughout the Appalachian Region and across a wide variety of categories with varying objectives. The focus of this analysis is to examine economic impacts, including job creation and retention, business service, economic diversification and income growth. In addition to the data analysis component, discussions with rural policy experts were also held to gather additional insight into particular challenges and potential solutions that can be implemented to help achieve the goals of the Appalachian Regional Commission.

Chapter 3 of this report provides an overview of various methods of program evaluation employed by ARC and other organizations. Chapter 4 provides a review of past reports and program evaluations and an assessment of their relevance to this particular evaluation. Chapters 5 and 6 highlight performance measurement and outcomes applicable to the evaluation and present the findings of 15 case studies of funded projects. Chapter 7 highlights interviews with rural policy experts and Chapter 8 provides a summary of study findings and recommendations.

3 Definition of Evaluation Criteria

3.1 Introduction

Appalachian Regional Commission (ARC) investments fund a wide variety of locally developed projects, including those targeted at job creation and retention. ARC's job creation and retention projects generally fall into four categories: business development, community development, infrastructure and public works, and other. The Job Creation and Retention Program Evaluation focuses on non-infrastructure and public works projects.

Business development programs include non-physical infrastructure projects to enhance local economic development efforts related to business outreach, small-business support, and industry-specific initiatives. Specific project types within the ARC.net database under this category include: technical assistance, entrepreneurship, business incubators, energy, agriculture development, revolving loan funds and access to capital, market expansion, and international trade assistance. Community Development projects include ARC investments that support a range of community development initiatives such as downtown revitalization, development of community facilities, planning, and parks and recreation initiatives. Other/Miscellaneous projects include projects in areas such as tourism development, health planning, flood-related investment, and mental health.

A goal of ARC is to better understand the success of its programs in achieving its goals. Performance management is a policy-directed, data-driven, performance-based business practice that links organizational goals and objectives to resources and results. The outcomes of performance-based management include a more efficient distribution of limited resources and a focus on accountability of decision-making. Performance management has been in use for over a decade in various public works fields, and over that time it has evolved from a focus on identifying measures and tracking performance to using performance measures in decision-making. This increased focus on managing with performance measures has enhanced the role of performance evaluation to address two important questions: 1) How are we doing? And 2) How can we do better?

This report provides detail on the various methods employed by ARC and other organizations to evaluate program performance. This information is based on a review of three ARC studies and two studies from other agencies that focus on program evaluation reports. Traditional evaluation methods and other approaches are described in Section 3.2, and studies that have relied on these methods to measure program performance are highlighted throughout this report. The major evaluation approaches discussed in the report include:

- Surveys
- Observation or site visits
- Analysis of experimental data
- Before and after comparisons
- Theory-based evaluation and modeling
- Case studies

- Application of other studies
- Use of expert opinion
- Statistical analysis and causal models
- Input-output modeling
- Benefit-cost analysis
- Sensitivity analysis and risk analysis

A complete annotated bibliography that provides the name of the study, primary purpose, overall conclusions and other information is also provided in this report. Five studies were reviewed for this project:

- Program Evaluation of ARC's Tourism, Cultural Heritage, and Natural Asset-Related Projects (September 2010)
- Creating an Entrepreneurial Appalachian Region: Findings and Lessons from an Evaluation of the Appalachian Regional Commission's Entrepreneurship Initiative 1997-2005 (April 2008)
- Evaluation of The Appalachian Regional Commission's Community Capacity-Building Projects (July 2004)
- Evaluation of the BITS Incubator Program & the Intelligent Island Incubator (November 2003)
- Implementation Evaluation of the Community-Based Job Training Grant (CBJTG) Program (December 2012)

The remainder of this section describes different methods to conduct program evaluation, keeping in mind that it is common to apply two or more techniques to strengthen evaluation findings and examine causal relationships between a program and its desired outcomes.

3.2 Program Evaluation Methods

There are a number of different approaches to measuring project performance. A description of each method, its pros and cons, and its applicability to ARC job creation and retention project evaluation is provided below.

3.2.1 Surveys

A very common approach to assessing project performance used by private and public entities is the implementation of a survey. There are three major survey types discussed in the literature: cross sectional, panel surveys, and criteria referenced.

1. Cross sectional: Measurements are made for multiple units at a single point in time.
2. Panel: Similar to a cross-sectional survey but has the added feature that the information is acquired from a given sample unit at two or more points in time.
3. Criteria Referenced: Enables evaluators to answer normative questions, which compare actual performance to an external standard of performance.

Surveys are versatile and, when properly done, produce reliable and valid information. They require expertise in their design, implementation and interpretation, however, and the results can be easily misused. The guidance offered in several commonly referenced studies² recommends several basic steps before implementing a survey.

1. Other evaluation options: Evaluator should check to see if required data are available elsewhere and determine whether the survey is the most cost-effective and efficient way to collect the data.
2. Good front end planning:
 - a. Identify what specific information will address a given evaluation issue;
 - b. Determine sources of information (e.g., types of respondents);
 - c. Choose methods to be used for sampling sources (e.g., random sampling) and collecting information (e.g., structured interviews and self-administered questionnaires);
 - d. Determine timing and frequency of information collection;
 - e. Decide on basis for comparing outcomes with and without a program; and
 - f. Develop the analysis plan.
3. Survey design: Avoid “nice to know” data collection and keep survey succinct and clear
4. Survey pretest: Pretest on a representative sample of the survey population. Provides information on clarity of questions, response rate, time and length to complete, and the appropriateness of survey method. It also allows adjustments to the survey approach as necessary.

Applicability to ARC Program Evaluation

ARC utilizes cross-sectional surveys to collect data for program evaluation in a number of different areas and then uses this information to estimate the full impacts of a program. Previous ARC program evaluations, including both the Infrastructure and the Education & Workforce Development Program Evaluations, have successfully employed this approach. The ARC.net database of projects includes a significant amount of data collected through the use of surveys, which have most recently been conducted online.

3.2.2 Observation or Site Visits

This program evaluation technique involves on-site visits by an evaluator to locations where a program is operating to observe activities and to take notes. Program participants and leaders may or may not be aware that the program is being evaluated. When considering this evaluation approach, it is important to be aware that program staff may alter their behavior if they know they are being observed. The following recommendations were made in the reviewed guidance:

² These studies include, but are not limited to, the Treasury Board of Canada's “Evaluation Methods: Measurement and Attribution of Program Results” and HM Treasury's “The Magenta Book: Guidance for Evaluation”

1. U.S. General Accounting Office³ encourages an evaluator to consider social/cultural mores of the area where the evaluation is to be conducted. If the evaluation is in a rural area, for example, the evaluator must be sensitive to the difference in culture between a rural and urban environment.
2. Consider whether the population being studied is stable. Are residents transient or do people live in the study area for decades? A neighborhood where residence is transient may require a different implementation strategy than one in which people do not move.
3. Determine whether an on-site visit to evaluate a program is justifiable on a cost basis. On-site visits can be very useful but also very costly.
4. Be aware that an evaluator may input some subjectivity in his or her assessment of a program.
5. Keep in perspective that observation offers only anecdotal evidence unless it is combined with a planned program of data collection. By itself, it is not grounds for generalization about a program.

While this type of evaluation approach may be costly and may be subject to the perception of the evaluator, it does offer the opportunity to collect important qualitative information that may not be collected through other evaluation methods. The guidance offered by the Treasury Board of Canada⁴ points out that this approach may allow an evaluator to see things that may escape staff members or identify issues they are reluctant to raise in an interview. This is an important benefit of this evaluation approach.

Applicability to ARC Program Evaluation

Site visits have been a part of previous program evaluations conducted by ARC. In the past, these visits have been one approach of several used in these evaluations. As another example, the Economic Development Administration (EDA) conducted "Public Works Program Performance Evaluation," in May 1997, which involved site visits. Specifically, EDA invited grantees to seminars at thirteen locations across the country. At these seminars, they were instructed on technicalities of the team's information requests and the specific information that would be required as part of the program evaluation. One-day seminars were held in Atlanta, Austin, Chicago, Cincinnati, Denver, Hartford, Little Rock, Los Angeles, Myrtle Beach, Orlando, Philadelphia, San Francisco, and St. Louis. Research team members also physically visited 25 percent of the grantee locations for site inspections. Information from these visits, combined with survey data, was used in the evaluation performance metrics. Like ARC, EDA's performance measures include permanent jobs created and private and public funds leveraged. Information related to the diversification of the local economy and tax base added to the community was also assembled by EDA program evaluators.

³ United States General Accounting Office, Program Evaluation and Methodology Division, *Designing Evaluations*, March 1991.

⁴ Treasury Board of Canada. *Program Evaluation Methods: Measurement and Attribution of Program Results, Third Edition*.

3.2.3 Analysis of Experimental Data

Based on the Treasury Board guidance, program evaluation through experimental designs is the most rigorous approach available for establishing a causal relationship between programs and their outcomes. Unfortunately, this approach is impossible to implement for many programs, particularly when the program has been running for some time.

Experimental designs are characterized by a random assignment of participants to a “treatment” or separate “control” group. This process ensures that the groups being evaluated are equivalent (other than treatment), and the randomized assignment of participants to different groups prior to a program being implemented helps create an even playing field from which to draw comparisons, once the program is operational.

Other related designs include:

1. Quasi-experimental design
 - a. Do not use randomization to create treatment and control groups. Treatment group is usually already given and one or more comparison groups are selected to match the treatment group as closely as possible.
 - b. Implementation takes creativity and skill to design.
 - c. Can provide highly accurate findings.
2. Implicit design
 - a. Typical evaluation design, but least rigorous.
 - b. Post-program evaluation with no control group – make a measurement after exposure to the program and then make assumptions about conditions prior to the program.
 - c. Flexible, versatile and practical to implement.
 - d. Offers little objective evidence of the results caused by the program.

Applicability to ARC Program Evaluation

A quasi-experimental study funded by a National Science Foundation grant and conducted by Andrew Isserman and Terance Rephann performed an empirical analysis examining the extent to which ARC projects have stimulated the Appalachian economy. The study measures the effects of ARC programs on 391 counties within the region using this evaluation approach.⁵ Additionally, the Appalachian Regional Commission conducted a quasi-experimental study examining changes to the region since 1965.⁶ This study noted that this approach is highly desirable to determine whether or not ARC intervention or other factors were the cause of the changes. This approach could be useful to ARC in its job creation and retention program evaluations as well, though it would be challenging because of the number and range of projects being evaluated, the

⁵ “The Economic Effects of the Appalachian Regional Commission: An Empirical Assessment of 26 Years of Regional Development Planning,” prepared by Andrew Isserman and Terance Rephann, *Journal of the American Planning Association*, Volume 61, Issue 3, 1995.

⁶ http://www.arc.gov/research/researchreportdetails.asp?REPORT_ID=113

cost to conduct this type of evaluation, and the need to determine a statistically valid “control” group for comparison purposes.

3.2.4 Before and After Comparisons

Before and after assessments⁷ compare outcomes for the units of study before the units were exposed to a program to outcomes measured after they began to participate in it. Unlike experiments, there is no separate comparison group, which is a weakness of this approach. This can be mitigated somewhat by evaluating the program at many different points in time. With a sufficient number of evaluation points, an interrupted time series analysis can be applied to this design to help draw causal inferences. A rule-of-thumb is a minimum of 50 before/after observations, based on the evaluation guidance reviewed. Data consistency is also an important element to before and after comparisons. The time series developed needs to be free of definitional and measurement changes, because these can be mistaken for program effects.

Applicability to ARC Program Evaluation

This comparison approach has been utilized by ARC in its prior program evaluations, including past studies to estimate the impacts of ADHS highway investments⁸, though it has not been done specifically on job creation and retention projects. The methodology to analyze the highway investments involved developing profiles of counties prior to project implementation and comparing this baseline to the counties after the program was put in place. The ADHS study was strengthened by comparing the results to counties with no investment.

3.2.5 Theory-Based Evaluation and Modeling

According to The HM Treasury’s “The Magenta Book, Guidance for Evaluation⁹,” theory-based evaluation approaches can offer an overarching conceptual framework within which specific evaluation studies can be designed. This approach is complementary, and not an alternative, to other evaluation approaches. The use of a theory-based evaluation can provide new data and evidence that can be incorporated into the evaluation framework as appropriate. One practical way to do this is through a simulation model.

Simulation models can be used to combine existing and new evidence to answer evaluation questions. It can be subject to some uncertainty, however, due to the need to make assumptions about the relationships between different pieces of evidence. Simulation models do allow an evaluator to estimate the incremental effects of a program in complex and uncertain situations, which is not the case with some other evaluation approaches. For very complex programs, evaluation may only be possible through theory-based evaluation or simulation modeling.

⁷ Implicit Designs and Before/After Comparisons are similar evaluation approaches, but the former makes assumptions about conditions before the program was put in place and the latter uses observations both before and after the program was implemented.

⁸ These studies include “Appalachian Development Highways Economic Impact Studies” prepared by Wilbur Smith Associates for the ARC in 1998 and “Economic Impact Study of Completing the Appalachian Development Highway System” prepared for ARC by Cambridge Systematics in 2008.

⁹ United Kingdom Cross-Government Evaluation Group (HM Treasury), *The Magenta Book: Guidance for Evaluation*, April 2011.

Generally, a simulation has three main components based on evaluation guidance¹⁰:

1. Input data
2. Mathematical model
 - a. Stochastic – incorporates a random data generator
 - b. Deterministic – does not incorporate a random data generator
3. Output data

Simulation resembles other statistical techniques, such as regression analysis, and these techniques may actually be used to build a simulation model. Once the model is constructed, however, the inputs provided are actually used by the model to generate outputs. The output generated by the simulation model can be checked against actual real world outcomes.

The guidance suggests that some form of simulation modeling is likely to play a role in a large proportion of program evaluations. Where outcomes are expected to occur over a number of years, some simulation of these effects might be necessary to ensure that evaluation evidence is obtained in a timely fashion. The primary benefit of simulation modeling is that an evaluator can estimate incremental effects of a program in a complex and uncertain situation. The primary drawback to this approach is that a sophisticated understanding of the dynamics of the program is required, as is some skill in building quantitative models (or the cost of obtaining models, such as the Regional Economic Models, Inc. [REMI] a dynamic, time-series based economic forecasting and simulation model).

Applicability to ARC Program Evaluation

ARC has utilized simulation models for its economic impact assessments of programs, including IMPLAN, ARC-LEAP, REMI, and TREDIS. These models are primarily used to estimate indirect and induced effects based on direct effects elicited through surveys. EDA also included the use of simulation models in some of its program evaluations. For example, EDA conducted input-output analysis to estimate indirect employment and investment impacts (multiplier effects) of EDA investments. They also conducted regression analysis to estimate the impact of the EDA investments on countywide employment and wages.

3.2.6 Case Studies

Case studies usually involve a variety of data collection methods, including surveys and interviews. While it is tempting to do more case studies than fewer, guidance suggests that the study of a critical case may be more defensible than the case study of a representative sample. Unfortunately, using one case study in an evaluation does not enable the evaluator to make generalizations about the overall program. Case studies:

1. Enable an in-depth analysis that would not be possible with more general approaches;

¹⁰ Guidance from the Treasury Board of Canada *Program Evaluation Methods: Measurement and Attribution of Program Results, Third Edition*.

2. Are typically expensive and time consuming;
3. Usually lack a statistical basis from which to generalize conclusions – it is difficult to do enough case studies to provide an adequate sample from which to draw conclusions; and
4. Provide broad insights on the program and the real world context of impacts.

The Magenta Book recommends that case studies be carried out before, or in tandem with, other data collection efforts. According to the US GAO guidance¹¹ on program evaluation, there are generally three types of case studies:

1. Single case study:
 - a. Information is acquired about a single individual project, process, or entity.
 - b. Qualitative information that describes events and conditions from various points of view can be collected.
 - c. Selection of a single case and the data collection may be challenging.
 - d. Analyzing and reporting qualitative data can be difficult, and the evaluation design must have explicit plans for these tasks. There are several different types of single case studies based on the literature:
 - Illustrative – Describes event or condition.
 - Exploratory – May serve as a precursor to a larger evaluation or provide preliminary information.
 - Critical instance – Investigates one problem or event.
2. Multiple case studies:
 - a. Likely to produce stronger conclusions than a single case study.
 - b. May be appropriate for evaluating either program operations or results.
 - c. Selecting variety among cases is important to avoid bias, as is uniform information collection.
3. Criteria-referenced:
 - a. Can be adapted to answer normative questions about how well program operations or outcomes meet certain performance criteria.
 - b. Carefully choosing the sample of cases to evaluate is critical.

Applicability to ARC Program Evaluation

A case study can help develop a clear, well-reasoned and comprehensive understanding of the situation, project or people affected by a program. Case studies are often used to supplement or complement a more quantitative evaluation approach, helping evaluators better understand the causal logic.

¹¹ United States General Accounting Office, Program Evaluation and Methodology Division, *Designing Evaluations*, March 1991.

The “Program Evaluation of ARC’s Tourism, Cultural Heritage, and Natural Asset-Related Projects” utilized case studies, as well as a survey and information obtained from other reports, in its evaluation. For the job creation and retention program evaluation, case studies of 12-15 projects are expected to help highlight best practices of existing programs, as well as provide context for the data analysis components of the evaluation.

3.2.7 Application of Other Studies

A literature review of other studies, or a file review of data and information, enables an evaluator to make the best use of previous work in the field under investigation. Application of other studies can help: a) to determine the best analytical methods and performance measures to use; and b) use assumptions and data findings to help compare and estimate program impacts. In addition, the evaluator may learn from the experiences, findings, and mistakes of other entities that have conducted program evaluations. Past research can suggest hypotheses to be tested or evaluation issues that should be examined in the current study, and specific methodological difficulties can be identified and mitigated. In some cases, evaluation questions may be directly answered on the basis of past work or redundant data collection.

Another advantage to reviewing other studies is that sources of secondary data may be uncovered, which may lessen the need to collect primary data. While this evaluation approach is economical, it is not always appropriate for a particular program evaluation. Additionally, when using other studies to evaluate a particular program, it is sometimes difficult to determine the accuracy of the data gathered through a previous study.

Many project evaluations utilize a review of other studies as a first step in a larger evaluation of a program. ARC has employed this approach in its work, and other organizations have incorporated the same sort of preliminary review of studies prior to embarking upon a larger program evaluation.

Applicability to ARC Program Evaluation

Reviews of other studies are primarily applicable in terms of determining methodology and performance measures for the job creation and retention evaluation. We anticipate cross-checking results from the new program evaluation with the results from other program evaluations that have attempted to measure similar projects.

3.2.8 Other Potentially Applicable Evaluation Approaches

Other applicable approaches to program evaluation were discussed in the studies reviewed by the team. These methods are generally sub-sets of or related to the overarching methods described above.

Use of Expert Opinion

Collecting data from experts is a method best suited to supplementing other measures of program outcomes. An advantage to this approach is that data can be collected and summarized systematically. In addition, the opinions of experts may vary and experts may not be equally knowledgeable about a program or issue. While this approach should

not be used as a sole source of data for an evaluation, it can help fill in the gaps or offer detail on a particular program. For ARC program evaluations, this approach could be incorporated as part of a case study or survey effort.

Statistical Analysis and Causal Models

Statistical analysis and development of a causal model requires expertise, and not all programs can be analyzed using these approaches. A causal model is based on an equation that describes the marginal impact of a set of selected independent variables on a dependent variable. This approach focuses on variables to be included in the model (endogenous and exogenous) and their postulated relationships. Regression analysis is a technique employed to measure the impact of one variable or variables on another, the causal relationship. With respect to program evaluation, the program is only one of several independent variables that are expected to affect the dependent variable. Determining when it is appropriate and how to apply statistical analysis to measure causality is the focus of Impact Analysis for Program Evaluation.¹² The author also discusses the use of experiments and quasi-experiments as part of an overall evaluation that includes statistical analysis.

Input-Output (I-O) Modeling

A variation of theory-based evaluation and modeling, this type of approach consists of using a model designed to depict the mutual interdependence among different parts of an economy. It describes how one industry uses the outputs of other industries as inputs, and how its own outputs are used by other companies as inputs. ARC uses I-O models to measure the total economic impacts (including multiplier effects on indirect and induced demand) of direct project impacts, which are often obtained through interviews with grantees. While useful in better understanding the impact of a program, these types of models and their results can be misused in evaluations. For example, offsetting negative effects generated by taxes and borrowing necessary to support a program need to be factored into an I-O model. Otherwise, the impacts of the program on the economy may be overstated. Other challenges include measuring the direct impacts of a program in terms of additional spending, employment, etc., or controlling for potential displacement of activity from other sectors of the economy (e.g., new retail activity that displaces or impacts existing retail establishments).

EDA and ARC have utilized I-O models in their program evaluations to estimate total job impacts, business sales, and other economic variables.

Benefit-Cost Analysis

Benefit-cost analysis looks at a program's net worth and assesses and compares program alternatives. The issue of attribution and incrementality of effects over a "base case" must be addressed prior to doing this type of analysis. Benefit-cost analysis is more a comprehensive approach to assessing the effects of a program or project, than an approach to measuring its performance. It uses the results of interviews, experiments, case studies, and so forth, as inputs and produces summary measures of monetary value. Most typically, benefit-cost analysis is used to assess the future impacts of

¹² Impact Analysis for Program Evaluation, Second Edition, by Lawrence B. Mohr, 1995.

proposed investments, although it can be used for program evaluation if benefits can be measured and isolated. Regardless of the timing of this analysis, the guidance recommends that a sensitivity analysis of key assumptions be conducted if this analytical approach is employed.

Sensitivity Analysis and Risk Analysis

Analytical work is often directed toward a single “expected outcome,” supplemented with alternative scenarios. The limitation of this approach is clear – while it may provide the single best statistical estimate, it offers no information about the range of other possible outcomes and their associated probabilities.

There are two ways to mitigate this issue. One common approach to providing added perspective on reality is “sensitivity analysis.” Key assumptions are varied one at a time in order to assess their relative impact on the expected outcome. The problem here is that the assumptions are often varied by arbitrary amounts. A more serious concern with this approach is that, in the real world, assumptions do not veer from actual outcomes one at a time. It is the impact of simultaneous differences between assumptions and actual outcomes that is needed to provide a realistic perspective on the riskiness of a forecast.

Risk Analysis avoids the problems outlined above by measuring the probability or “odds” that an outcome will actually materialize. This is accomplished by attaching ranges (probability distributions) to the forecasts of each input variable. The approach allows all inputs to be varied simultaneously within their distributions, thus avoiding the problems inherent in conventional sensitivity analysis. The approach also recognizes interrelationships between variables and their associated probability distributions. Sensitivity and risk analysis can be useful as part of an overall program evaluation.¹³

Comparison to Current Program Evaluation Approaches Used by ARC

Generally, ARC has evaluated its investments using a combination of approaches applied to a sample of ARC projects. The sample is selected to be representative of the mix of project types and area characteristics within the region. The first step in the evaluation has been a review of ARC records and classification of the programs into a database. A phone or online survey of several local or regional development staff, local government and civic leadership, and/or private sector representatives was then conducted. Information collected through the survey and other secondary data sources were used to construct project profiles. Site visits were then made to validate project results and to develop more detailed case studies. Site selection has historically been based on project type, geography, and area demographics.

In past studies, the projects were evaluated by comparing the anticipated and actual project outcomes in terms of key performance measures. In the initial project applications for ARC funding, local applicants are required to estimate the number of jobs to be created or retained, the number of businesses to be served or retained, and the number of workers or trainees to be impacted directly by the project. This information is considered the “anticipated” outcomes.

¹³ As an example, see the Federal Highway Administration (FHWA) Economic Analysis Primer, August 2003.

ARC studies that use several evaluation approaches are consistent with guidance on program evaluation and similar to how some other agencies assess their program's impacts. The evaluation guidance that was reviewed suggests that utilizing multiple evaluation approaches is useful in that each approach may help fill in the gaps that may occur when using only a single approach. ARC's decision to utilize surveys, on-site visits and case studies, as well as before and after comparisons aided by an input-output model, for many of their evaluations is consistent with the program evaluation guidance reviewed by the team.

3.3 Summary and Conclusions

The approaches and methods described in this section are summarized in Table 1 below. The table includes a brief description of the methods, identifies the specific questions being addressed, and assesses the extent to which the methods have been used in the evaluation of ARC programs.

Table 1: Summary of Approaches and Methods

Approaches & Methods	Brief Description	Principal Strengths & Weaknesses	Use in ARC Evaluations
Surveys	Collecting data or information directly from those affected by a program or action, typically through a mail or online questionnaire; or through phone interviews. May be cross-sectional, panel, or criteria referenced.	Allow gathering large amounts of performance data at a relatively low cost. Accuracy of data depends on survey and questionnaire design, as well as quality of information available to interviewees. Can only be used to evaluate the direct effects of a program or action.	Yes, extensive
Observations or Site Visits	Visits by an evaluator to locations where a program is operating, to observe activities, assess changes, and take notes.	Allow gathering detailed, qualitative information on the effects of a program at a specific location, or set of locations. But is often costly to implement; and findings may be biased by evaluators' perception.	Yes
Analysis of Experimental Data	Comparison of performance between a treatment group and a control group. Design may be experimental (with random assignment of participants), quasi-experimental (without randomization), or implicit (without control group).	Considered most rigorous approach to establishing cause-and-effect relationships between programs and observed changes. But is generally difficult and costly to implement, and may not be suited to all programs and actions.	Limited
Before & After Comparisons	Comparison of performance before and after implementation of a program, for a single group of units or participants.	Effective in measuring changes over time, but causal relationships between programs and outcomes may not be formally established.	Yes

Approaches & Methods	Brief Description	Principal Strengths & Weaknesses	Use in ARC Evaluations
Theory Based Evaluation & Modeling	Use of a conceptual framework and/or model to develop assumptions about, or simulate the impacts of a program.	Must be used in conjunction with other approaches and methods. Particularly effective in estimating the impacts of complex programs. If not properly documented, simulation models may be viewed as “black boxes,” limiting the applicability of their output.	Yes, in the estimation of indirect and induced economic impacts
Case Studies	Detailed analysis of a critical case or a limited set of cases, involving a variety of information gathering techniques (including interviews, site visits, etc.).	Provide in-depth information and analysis of effects, but can only be applied to a limited number of units or locations. Results can rarely be generalized. Particularly useful in validating or augmenting the findings of a broader data collection effort (e.g., survey).	Yes
Application of Findings from Other Studies	Use of methods, data sources, assumptions and/ or estimates from existing studies.	Useful in methodology development stages. “Transfer” of impact estimates and other quantitative or qualitative findings are generally low-cost, but not considered best-practice.	Only to inform selection of methods and performance measures
Use of Expert Opinion	Eliciting information directly from Subject Matter Experts, to supplement other data sources and collection efforts.	Particularly useful when observation and traditional data collection techniques fail to produce adequate results. May also be used for review and validation. Requires use of formal elicitation techniques to limit potential for bias.	No
Statistical Analysis and Use of Causal Models	Use of statistical methods, including regression analysis, to estimate “causal” relationships between program attributes and performance. Often used for the analysis of experimental or quasi-experimental data.	Allows formal hypothesis testing, but robustness of results depends on quality of data and survey design (see Analysis of Experimental Data). Is not applicable to all types of programs.	Limited
Input-Output Modeling	Use of accounting tables tracing linkages of inter-industry purchases and sales to estimate the indirect and induced economic impacts of a program or action.	A sub-set of Theory Based Evaluation & Modeling. Economic impacts estimated with off-the-shelf I/O models are typically gross impacts, ignoring many further possible interactions and responses.	Yes, in the estimation of total economic impacts

Approaches & Methods	Brief Description	Principal Strengths & Weaknesses	Use in ARC Evaluations
Benefit-Cost Analysis	Estimation of the costs and benefits of a program, defined in terms of well-being (welfare) with a view to providing an overall assessment of value-for-money. Is not a performance-measurement approach per se.	Primarily used for program assessment, ex-ante; but may be used ex-post to estimate the return on investment of existing programs (based on performance measures developed through other means).	No
Sensitivity Analysis or Risk Analysis	General approaches to incorporating uncertainty into performance measurement and program evaluations. Can be applied in conjunction with any of the above quantitative methods.	Assists decision-makers in assessing the degree of confidence they should place in the outcomes of an evaluation.	No

Table 2 evaluates each approach or method against a set of criteria, defined as follows:

- **Ease of use in ARC evaluations:** whether, once developed, the method and associated tools can be used by local, regional and ARC staff with a range of technical expertise;
- **Ease of interpretation:** whether the resulting performance measures can be easily understood and interpreted;
- **Flexibility:** whether the method can be applied to a wide range of conditions and projects;
- **Data availability:** whether the data required to apply the method are readily available and/or accessible at a reasonable cost;
- **Ability to “attribute” impacts:** whether the contribution of the program to observed outcomes can be formally tested;
- **Estimation of counterfactual:** whether the method requires use of a control group and/or estimation of a counterfactual;
- **Transparency:** whether all steps of the method can be described clearly, including where applicable the “logic” used to derive outcomes from output measures; and
- **Acceptance and credibility:** whether the method is widely accepted and/or conforms to industry standards.

The ratings shown in the table were developed, somewhat subjectively, by the Project Team. The criteria are rated on a scale of 1 to 4 (stars), 4 representing the easiest or most flexible method, and 1 the least.

Table 2: Rating of Approaches and Methods against Criteria

Criteria							
	Ease of Use for ARC	Ease of Interpretation	Flexibility	Data Availability	Estimation of Counterfactual	Transparency	Acceptance & Credibility
Approaches & Methods							
Surveys	★★★★	★★★★	★★★	★★★	No	★★★★	★★★★
Observations or Site Visits	★★★	★★★	★★	★★	No	★★★★	★★★★
Analysis of Experimental Data	★	★★	★★	★	Yes	★★★★	★★★★★
Before & After Comparisons	★★	★★	★★★★	★★	No	★★	★★
Theory Based Evaluation & Modeling	★★★	★★	★	★	Sometime	★★	★★★★
Case Studies	★★★	★★★★★	★★★★★	★★★★	Generally Not	★★	★★★★
Application of Findings from Other Studies	★★	★★	★	★	No	★★	★
Use of Expert Opinion	★★	★★★★	★★★★	★★★★	Not Explicitly	★★	★★
Statistical Analysis and Use of Causal Models	★★	★★	★★	★	Sometime	★★★★	★★★★
Input-Output Modeling	★★★	★★★	★★★★	★★★★★	No	★★	★★★★★
Benefit-Cost Analysis	★★	★★★★	★★★★	★★	Yes, Needed	★★★★	★★★★
Sensitivity Analysis or Risk Analysis	★★★	★★	★★★★	★★	N/A	★★★★	★★★★

Chapter 4 of this report provides the annotated bibliographies for the five studies reviewed for this program evaluation.

4 Review of Past Reports and Program Evaluations

4.1 “Program evaluation of ARC’s Tourism, Cultural Heritage, and Natural Asset-Related Projects”

This report was prepared for the Appalachian Regional Commission (ARC) by Regional Technology Strategies, Inc. with Mt. Auburn Associates and Appalachian State University in September 2010.

4.1.1 Purpose and Goals

The purpose of the evaluation was to examine and critique 132 of ARC’s investments in Tourism, Cultural Heritage and Natural Asset-Related projects. These projects were analyzed within the context of ARC’s 2005-2010 Strategic Plan.

4.1.2 Key Issues Identified

1. **Grantees used inconsistent and unsound methods to document employment impacts.** Some grantees did not collect any data that can be used to analyze the impact of these projects. Methods exist to measure the economic impacts associated with tourism projects, but grantees did not typically use them. For example, economic impacts can be quantified by: tracking the number of users of marketing tools or the number of visitors to tourist attractions; surveying visitors to find out what role the marketing or tourist attraction had in bringing them to the area and the amount of visitor spending that occurred; and using economic models to estimate the impact of visitors. Some grantees reported increased visitation to tourism attractions or the number of visits to tourism websites, as proxies for employment impacts. Getting all of the grantees to use a single proven method to collect or estimate economic impacts would improve the quality of data.
2. **Some of the employment impacts will not happen until after project reports are written and the current metrics may not accurately capture the impacts.** Most of the data received by ARC come from final reports that are due 30 days after the project is completed. Employment impacts typically take place after that 30 day period. Post-project reporting could help solve this problem, although this would likely add more issues related to the reporting cost and implementation. The current categorization of “job creation” and “job retention” impacts does not always lend itself to a clear definition that can be used to generate a useful estimate of the actual overall impacts for these types of projects.
3. **Leveraged private investment (LPI) is difficult to measure for most projects.** However, LPI is generally considered by ARC to be a proxy for job creation and retention impacts. Due to the difficulty in measuring LPI, a more efficient approach could be to collect local sales data and use an economic impact model to generate job impacts. This can only be done if reasonably accurate sales data generated from the projects could be collected.

4. **Visitation and visitor spending are affected by factors other than ARC-Funded projects.** There are many factors that influence an individual's decision to visit a particular location, including available tourist attractions, exposure to marketing, the local economy, travel time required, cost to visit, and local crime levels. While projects designed to improve or repair tourist locations may have an impact on the decision-making process, it is impossible to determine whether the investment impacts visitation and visitor spending in any significant, measurable way.
5. **Differences in project success definitions may lead to different measurements of results.** The results of the study indicated that in two of the three categories where actual results were able to be compared to predicted results, the actual results reflected much greater impacts than the predicted. The ratio of the actual to predicted results suggests that this is most likely due to differences in definitions of the criteria, such as "participants served" and "programs and plans developed." Changes in staff and the passing of time can lead to inconsistencies in these definitions which may generate falsely positive results.

4.1.3 Key Performance Measures

The study used a variety of performance measures to gauge the extent to which projects achieved their projected outcomes and aligned with the strategic goals of ARC. These measures were both qualitative and quantitative, including:

1. Initial projections and actual outcomes on key parameters, including numbers of jobs created and retained, leveraged private investment, and new businesses created.
2. Initial projections and actual outputs, such as people served, businesses served or assisted, and programs or plans created.
3. Impacts related to the Triple Bottom Line including competitiveness measures such as job stability, productivity, and access to markets, and other social measures such as civic life, health, education, public safety, etc.

4.1.4 Analytical Approach

The RTS team received 212 projects from ARC to use in their evaluation. However, several of these projects were removed from the evaluation because they were either recently used in an entrepreneur evaluation, projects that were solely intended to create a strategic plan, or were considered to be minor projects, such as funding attendance to a conference. Other projects were removed from the evaluation if they were from before 2000 or if they were funded after 2006 because it was determined that data for these projects would either be too difficult to collect or not yet available. After removing these projects, RTS had 132 projects left for their evaluation, including 72 closed and 60 open projects between 2000 and 2006. The sample includes projects from every state except South Carolina. The overall analytical approach is detailed as follows:

1. **Survey:** Two electronic surveys, one qualitative and one quantitative, were sent to project managers or other knowledgeable individuals within the grantee organization. The first survey was completed by 51 out of 98 recipients, or 52 percent; the second survey had a 60 percent completion rate, with responses from 69 of the 114

recipients. When an individual qualified to take the survey could not be identified, no survey was sent, thus further reducing the number of projects surveyed.

- a. **Survey 1:** The first survey focused on qualitative data such as the project manager's perception of project success and discussion of evaluation measures. This survey also asked respondents to qualitatively assess the Triple Bottom Line (TBL) for economic, social, and environmental impacts. For this part of the survey, respondents were asked about the impact their project had on categories including tourism revenues, visual landscape, and quality of jobs. Respondents answered with either "positive impact," "slight impact," "no impact," or "don't know."
 - b. **Survey 2:** The second survey focused on more quantitative data and was used to measure the outputs and outcomes of the project and visitation patterns. Where possible, the actual outputs and outcomes from the survey results were compared to the predicted values in the ARC.net database. This survey also measured impacts across the TBL, including economic, efficiency, social, and environmental measures. The TBL measures were rated on a qualitative scale in this survey as well.
2. **Interviews:** Thirty-two project managers and 61 stakeholders from 32 projects were interviewed. Generally speaking, participants' attitudes were positive and optimistic about their projects' outcomes and the importance of the role served by ARC, both in terms of funding and supporting grantees.
3. **Case Studies:** Seven case studies were conducted at sites throughout the Appalachian Region. These case studies were selected because they covered several different project factors, including focus, project size, and projected outcomes. The case studies highlighted several common outcomes that may be useful in preparing for future studies. Some highlights include:
 - a. Flexibility in project implementation is helpful in achieving success as projects tend to evolve from conception to completion.
 - b. Impacts often extend beyond initially anticipated areas in terms of both spin-off and impacting unrelated businesses.

Impacts are often difficult to track and estimate, posing some data collection and analysis issues. The spillover impacts are difficult to measure and the impacts being measured are not always the most important.

4.2 "Creating an Entrepreneurial Appalachian Region: Findings and Lessons from an Evaluation of the Appalachian Regional Commission's Entrepreneurship Initiative 1997-2005"

This report was prepared for the Appalachian Regional Commission (ARC) by Deborah Markley, Brian Dabson, Thomas Johnson, and Karen Dabson of the Rural Policy Research Institute Center for Rural Entrepreneurship, Sara Lawrence and Sara Yanosy of RTI, and Erik Pages of EntreWorks Consulting in April 2008.

4.2.1 Purpose and Goals

The goal of this study was to review and evaluate ARC's investments in entrepreneurship development. Specifically, this study evaluated the Entrepreneurship Initiative (EI) by looking at the outcomes from the sample projects as well as the broader policy impacts within the region. The evaluation sought to assess the three primary goals of the initiative – increasing the number of entrepreneurs establishing businesses in the region, increasing the survival rate of these businesses, and increasing the share of these businesses that grow to create jobs and wealth within the region. These objectives all support the strategic goals of ARC.

4.2.2 Key Issues Identified

Evaluating entrepreneurship investments can be a difficult task as there are no standard metrics for measuring success and no requirements for tracking outcomes of these investments. Several issues related to the evaluation were highlighted in this review:

1. **Entrepreneurship is a difficult concept to measure.** Many aspects of entrepreneurship are intangible, thus causing difficulty in qualitatively or quantitatively measuring outputs or outcomes of these investments. When program managers use traditional economic development metrics to gauge success, they are unable to accurately capture the full range of impacts generated by these projects. There is a layer of complexity associated with meeting the traditional ARC goals and metrics with these types of projects.
2. **This study relied heavily on self-reporting.** Self-reporting can lead to inaccurate assumptions about the outcomes of the projects. The projects were contractually obligated to submit final reports which were substantiated through audits and verification field visits to help ensure accurate reporting of results.
3. **Statistical models and methods were difficult to perform considering the small and diverse sample.** However, the descriptive statistical methods used, including the detailed interviews, helped to answer the research questions and provide appropriate recommendations for further funding.

4.2.3 Key Performance Measures

This evaluation interviewed project staff and stakeholders to determine the effectiveness of the entrepreneurship investments. Given the nature of the evaluation, the study team chose a before and after approach to assess the impacts of the project. Due to the diverse nature of the set of projects, much like the Job Creation & Retention projects being evaluated in this study, a broad set of metrics was required to show the impact of these diverse projects on the region. The team created a series of indicators for both outputs and outcomes that varied slightly to capture the best information for each type of project.

The following list indicates some of the performance measures used to gauge the extent to which projects achieved their anticipated outcomes and aligned with the strategic goals of ARC:

1. Businesses served

2. Jobs created
3. Jobs retained
4. Project participants
 - a. Training in entrepreneurship activities
 - b. Sector focused activity participation
 - c. General training and technical assistance
5. New businesses created
6. Private investment leveraged
7. Collaboration changes, and partnerships created
8. Change in sales
9. Performance improvements in terms of participation increases and performance of participants

4.2.4 Analytical Approach

The evaluation reviewed 229 closed projects out of the 448 total projects in five main categories that were funded from 1997 through 2005: 18 capital access projects, 42 entrepreneurship education projects, 30 incubators projects, 40 sectors¹⁴ projects, 71 technical assistance and training projects, and 28 other/not coded projects. The sample size was narrowed to 229 by removing any projects that were not closed (94) or that were funding for follow-on investments related to the initial project (125) to only investigate unique, closed projects. All grant information related to each project, even if it was for multiple grants, was reviewed for the analysis. Projects came from every state in the region.

Recognizing that entrepreneurship projects are diverse, the study team conducted a detailed review of a sample of projects and implemented a thorough interview process with key personnel and stakeholders for these projects. Data for this analysis were collected from various sources in a four-step process. The first step was to review ARC's project file to gather information about the project and implementation. The second step was to conduct phone interviews with the project directors to gather additional quantitative and qualitative data related to the project. The third step was to conduct phone interviews with project and non-project stakeholders to gain data on impacts throughout the region. The final step was to conduct site visits to gather data on place-based and policy impacts. The information gathered from these sources was analyzed using a metrics framework developed by the team to conduct a meta-analysis of the outcomes and impacts of these projects at both the local and regional levels.

¹⁴ Sectors projects combine aspects of the other types of projects but are targeted at a single business sector.

4.3 “Evaluation of the Appalachian Regional Commission’s Community Capacity-Building Projects”

This report was prepared for the Appalachian Regional Commission (ARC) by Westat in July 2004.

4.3.1 Purpose and Goals

The study sought to evaluate the success of community capacity building projects at meeting their original objectives, their success at achieving the Appalachian Regional Commission’s strategic goals, and the direct community impacts. Though there is not one specific definition of community-capacity projects, they all aim to achieve the common goal of developing resources to improve the conditions and quality of life of people within communities. The evaluation also evaluated best practices and policy changes that could improve future ARC program evaluations.

4.3.2 Key Issues Identified

Two key data-collection issues were identified during the process of this evaluation: reliance on self-reported data, and lack of consistency in data-collection requirements and performance measurement.

The first issue is that performance measurement for a given project was based off of self-reported data. Several issues are related to the reliance on self-reported data, including the lack of evidence to corroborate the reports. Two primary contributors to the lack of data are that some projects did not take the time to collect the data, and others lacked clear, measurable goals.

Compounding the data collection issue is the fact that projects funded before 1998 were not subjected to the same application guidelines as those funded after. The study period was from 1995 to 2003, so not all projects had the same data collection requirements. Until 1998, ARC had few guidelines about the inclusion of outcomes in applications and final reports. In 1998, ARC developed application guidelines that were oriented toward the Government Performance and Results Act (GPRA), which helped to improve the quality and consistency of reports. These issues result in a general lack of consistency in evaluating the purpose, outcomes and impacts of these types of projects.

4.3.3 Key Performance Measures

The study proposed 179 outcomes related to individual, organizational, and community based capacity improvements as well as economic, environmental and social development outcomes. The results suggested that most of the outcomes were related to short-term rather than long-term goals. These performance measures were used to assess whether the outcomes had been achieved according to ARC’s performance measurement system.

The projects were evaluated based on their impacts on individuals, the enhancement of skills, enhancement of empowerment, increased awareness of community issues, their impact on organizations, increases in collaboration, stability and growth, impacts on

communities, civic participation, and community pride among others. Due to the difficulty in defining outcomes and collecting quantitative data, most of the measures provided qualitative outcomes. The wide range of measures used in this study will be considered when determining measures for the Job Creation & Retention evaluation.

4.3.4 Analytical Approach

ARC funded 168 community capacity-building projects between 1995 and 2003. This study reviewed 100 of these projects, which were divided into 11 activity types that were grouped into four overall strategies: vision and direction, involvement, skills and knowledge, and support.

The evaluation approach involved four steps. The first step was to conduct a literature review to help the authors better understand the concepts and parameters associated with community capacity building projects. The second step was to review the applications and final reports of the selected 100 projects. The third step was to conduct 25 telephone interviews to obtain information about project activities and accomplishments for a representative sample. The final step was to conduct 12 site visits to supplement the data found in the other steps with more specific information related to the performance measures. The site visits were selected from projects that implemented innovative practices, achieved their desired outcomes, and had measureable performance indicators. These projects were selected to form a basis for best practices and the discussions focused on project context, approach, implementation, problems and obstacles, attainment of the goals, lessons learned and recommendations for performance measures.

The study also looked at the problems that arose during project implementation and how they were handled, beneficial practices that could be adopted elsewhere, and possible policy changes that could improve future ARC program evaluations.

4.4 “Evaluation of the BITS Incubator Program & the Intelligent Island Incubator”

This report was prepared for the Australian Government's Department of Communications, Information Technology and the Arts, by the Allen Consulting Group in November 2003.

4.4.1 Purpose and Goals

The objective of this evaluation was to assess the success and progress of the Building on Information Technology Strengths (BITS) Incubator Program. The BITS Program was funded by the Australian Government, and sought to build upon IT strengths to promote employment growth, local wealth creation, and entrepreneurship in the areas of information and communications technology (ICT). The BITS Incubator Program was established in June 1999 with a \$158 million commitment over five years to support three distinct areas: incubators to assist ICT small to medium enterprises (\$78 million); advanced networks and test-beds (\$40 million); and developing Tasmania as an “Intelligent Island” (\$40 million).

This evaluation focused on the Incubators and the Intelligent Island. The BITS Incubator Program supported business incubators that help entrepreneurs turn their technology and ideas into successful and competitive businesses. The Intelligent Island Program promoted employment growth and wealth by accelerating the growth of the ICT industries. This evaluation identified the key design factors impacting the success of the incubators, and assessed the contribution of the BITS Incubator program as part of the broader range of government programs supporting start-up and early-stage companies in Australia's ICT innovation system.

4.4.2 Key Issues Identified

Several issues were identified during the course of the evaluation. The first issue is that the Program was created during the height of the technology boom of the early 2000's, with Incubators structured under the presumption that the growth would continue. The bursting of the technology bubble forced the Incubators to reconsider their approaches and structures to accommodate the changing economic climate.

Another set of issues involves the ability to compare metrics and performance across Incubators. The incubators within the BITS programs are located in diverse and different geographic areas and have adopted different investment strategies, creating difficulty in making comparisons across the various sites. These Incubators were also relatively "immature" at the time of evaluation, with the average time of operation being three years. It typically takes approximately eight years for business incubators to fully establish themselves.

Finally, a traditional measure of success is return-on-investment, frequently measured in terms of revenues or profits. For the BITS program, this measure proves difficult due to the prevalence of non-profits within the Incubators.

4.4.3 Key Performance Measures

Due to the differences in the nature of the various companies and the business models of the various Incubators studied, each Incubator had relatively tailored performance indicators in order to best capture success. That said, several broad performance measures were identified to allow for comparison across the investments. These measures included those at the program level, those that measured the extent to which Incubators supported Incubatees, and quantitative assessment measures.

At the program level, these performance measures included: ability to leverage program funds, both cash and in-kind; the total in-kind contributions leveraged, which reflects the ability to convince others to contribute; and the extent to which the Incubators have achieved self-sustaining operations.

Measures that identified the level to which Incubators have supported Incubatees include:

- **Support for Incubatees** – a measure of the extent to which government and other resources reach the Incubatees, indicating the efficiency and effectiveness of the Incubator;
- **Incubatee achievements** – a measure of increased revenue and employment;

- **Incubatee capital leveraged** – a measure of the amount of additional funding that the Incubatee gathered;
- **Incubatee access to business angels** – a measure of access to those who bridge the gap between the Incubator and venture capital providers;
- **Incubatee/graduate sustainability** – a measure of the extent that the business remains viable after the intensive assistance ends; and
- **Satisfaction of Incubatees** – a measure of the overall satisfaction of the participants with the Incubator.

Development of quantitative measures to fully evaluate the success of the Incubators is difficult due to several factors, including the short operating duration, different operating locations, and different business models. Though there are difficulties, and it will take time to fully evaluate the success of the program, trends among several quantifiable measures can be seen. These include:

- **Efficiency in leveraging government funding** – measured as the dollar value of Incubator support divided by the total program funds spent;
- **Extent to which government funds went to Incubatees** – measured as the dollar value of support to Incubatees divided by the percent of Program funds spent;
- **Effectiveness of capital raised to date** – measured by the total Incubatee funds divided by the Program funds spent to date;
- **Effectiveness of increase in revenue to date** – measured by the increase in Incubatee and graduate revenue divided by the total program funds spent;
- **Effectiveness of Incubatee assessment of services provided** – measured by the percent of Incubatee and graduates who rated the Incubator in-kind services as “good”; and
- **Overall utility of the Program** – measured by the percent of Incubatees and graduates rating the Incubator as “good” or better.

4.4.4 Analytical Approach

The evaluation used a variety of qualitative and quantitative factors to measure the success of the Incubator Program. The first step in the approach was to identify the basic data to be gathered from the Incubators, Incubatees, and graduates to best evaluate the overall program. This input was supplemented with information from State government officials and venture capitalists to complete the assessment. The data collected for this evaluation was gathered by two primary methods: structured questionnaires and stakeholder interviews.

The surveys were aimed at gathering information on the Incubatee experience by polling all Incubatees, Graduates, and companies that have withdrawn from the Program before graduating. A total of 254 Incubatee surveys were distributed via the Incubators with 100 responses received. The survey contained various questions regarding the incubation experience including timing, funding and services, and their opinion of the benefits of incubation.

The stakeholder interviews included Incubator management, staff, and some Board members; a sample of the Incubatees; some State government officials associated with the Incubators; and a number of venture capitalists and financiers also associated with the Incubators. The interviews were structured based on a list of questions that reflect the Incubators each took a slightly different approach to aiding the start-ups and supported different business models. The interviews were designed to elicit qualitative information that could be readily gathered while still providing real-world perspective on how the BITS Incubators operate. The questions focused on gathering inputs and outputs on five key best practice areas – efficiency, effectiveness, relevance, utility, and sustainability.

4.5 “Implementation Evaluation of the Community-Based Job Training Grant (CBJTG) Program”

This report was prepared for the United States Department of Labor by the Urban Institute in December 2012.

4.5.1 Purpose and Goals

The purpose of this evaluation was to provide a comprehensive picture of the varying initiatives funded by the Community-Based Job Training Grant, including innovations developed, successes and challenges to date, and trends and patterns across projects. The results of these CBJTG-funded initiatives are considered through the lenses of program sustainability, accomplishments, implementation issues, and performance.

The Community-Based Job Training Grant was established by the U.S. Department of Labor's Employment and Training Administration in 2005. This grant program sought to strengthen regional economic competitiveness by addressing critical shortages at community and technical colleges in order to train workers in high-growth occupation fields. Grants were intended to help these institutions design and implement sustainable training programs to effectively provide workers with skills needed for specific industries, through providing a variety of resources. Between 2005 and 2009, CBJTG funding was provided for 279 individual initiatives in 49 states. There were four separate rounds of competitive funding, with between 68 and 72 grants awarded per year. Grants were typically awarded for an initial period of three years, with an option for no-cost extensions. Funding amounts ranged from \$499,014 to \$3,600,768. Due to a decrease in federal funding, all initiatives funded to start in 2007 or later experienced a one-percent rescission of funding.

4.5.2 Key Issues Identified

Several potential evaluation issues were identified during the course of the evaluation. Key differences in funding eligibility parameters during the different rounds of funding created challenges in comparing initiatives across the CBJTG Program. The first round only allowed community and technical colleges as applicants, while each of the later rounds expanded the applicant pool to include workforce investment system organizations, such as workforce investment boards, local workshop agencies, and One-Stop Career Centers. Because the first two rounds had different reporting requirements than the last two rounds, data are more representative of rounds three and four. As a

result, several survey respondents from the first two rounds did not submit a performance report or final report with their survey. Rounds one and two also ended several years prior to the evaluation, and a number of workers involved with these grants had likely moved on to different jobs.

Furthermore, some programs from the later rounds were still ongoing at the time of evaluation, so that real employment numbers were ultimately likely to be higher than those reported. The various CBJTG-funded initiatives also differ greatly in the number of participants trained - from as few as 37, to several thousand - leading to potential outlier issues.

Lastly, it is also important to frame the initiatives in a historical perspective. Many programs began during a time of relative economic strength, and continued through or ended during a bust period.

4.5.3 Key Performance Measures

The evaluation used a variety of measurements to gauge the extent to which initiatives achieved their targeted outcomes, and what challenges they had in doing so. The four categories of evaluative results were: performance, accomplishments, implementation issues, and sustainability of programming.

Performance: These measurements were primarily quantitative, and include the number of programs receiving funding in a given industry, the number of participants enrolled, the rate of participants who graduated/completed training, the number of participants who found employment, and the number of participants who found employment within their industry of focus. Data was also requested to determine the program's ability to leverage resources, both cash and in-kind, and to establish the capacity-building potential of these programs. Respondents were also asked to rate how important these individual measures were to their specific initiative.

Accomplishments: Through an open-ended question, respondents were asked to identify what they believed were the three greatest accomplishments of their program, and to provide their rationale.

Implementation Issues: Respondents were also asked via an open-ended question to indicate what presented the biggest challenges to the implementation of their program.

Sustainability of Programming: These measures analyzed the actual, logistical experience for programs that were no longer operational, as well as the plans to sustain activities in the future by those programs that were currently operational. These measures were both quantitative and qualitative, and included financial resources and expected levels of effort needed to sustain individual programs beyond their periods of performance.

4.5.4 Analytical Approach

Due to the wide range of foci and approaches across CBJTG programs, a variety of qualitative and quantitative factors were needed to properly measure the success of the Community-Based Job Grant Training program.

Surveys: Surveys were sent to all grant initiatives in the first four rounds of the CBJTG Program. Of the 279 surveys sent out, 220 were answered, for a response rate of 78.9 percent. Rounds three and four had a higher response rate (88 percent each) than rounds one and two (61 and 78 percent, respectively).

Grant documents:

1. Grant applications
2. Narrative quarterly reports
3. Financial reports

Case studies: Site visits to eleven grant initiatives at eight grant locations were conducted. These sites were selected to ensure variation along several criteria including industry, type of organization, round of grant, variation in target population, plans for partnerships, and geographic region.

5 Performance Measurement

5.1 Data Collection

A critical element of the Job Creation and Retention Program evaluation is the collection of data to supplement the existing grant information provided in ARC.net for projects funded between fiscal years (FY) 2004 and 2010. The combined ARC.net and survey database (i.e., Performance Measures Database) underlie the data analysis conducted as part of this overall program evaluation.

In order to best measure the success of ARC's job creation and retention grants in meeting the Commission's goals and objectives, the project team developed a survey instrument to supplement the information provided by the grantees. While data is collected directly from the grant recipients by ARC at the time of project funding, comparing this information to project outcomes and outputs after this funding has been awarded and the project has closed is a critical step in the overall evaluation process.

5.1.1 ARC.net Database

The starting point for the job creation and retention program evaluation was the ARC.net database of all ARC funded projects from FY 2004 to FY 2010. This database contains information from the initial grant application, including project identification number, amount of ARC funding, location, project type, and anticipated outcomes and outputs for all projects, including the 286 job creation and retention projects. Much of the data included in ARC.net is provided by the grant recipient.

The projects considered in this job creation and retention evaluation cover a wide variety of categories and project types. As defined in ARC.net, some project types consisted of a relatively small number of projects. In order to best enable a meaningful analysis, the evaluation team collaborated with ARC to aggregate some of the more similar project types based on the project description provided in ARC.net. This re-categorization and aggregation allowed for larger sample sizes than provided by the initial categorization. The aggregated categories for project types are:

- **Business/Training:** Any project that creates a business or incubator for an industry not listed in other categories. These projects may also try to train employees or adults who are not considered students.
- **Child Care/Education:** Any project looking to build or expand a school, design a new class or curriculum, set up a day care, or benefit children or students in some other way.
- **Community Building/Tourism:** Any project that looks to build, renovate or market tourist attractions, or repair local infrastructure to support the community's goals; for example, building recreational trails or street-scaping.
- **Energy/Environmental:** Any project that seeks to build a power plant, improve energy efficiency, or protect the environment.
- **Local Food:** Any project that tries to start or develop a farm, or a business, incubator, etc. in the fields of agriculture or culinary arts.

- **Planning/Research:** Any project that aims to develop a strategic plan, possibly associated with one of the other categories, or conduct a form of research.

After aggregating the projects, the project team updated the grantee contact information to optimize data collection. The resulting database incorporated the updated contact information to the existing information initially collected. The resulting database was as up-to-date as achievable in the timeframe, prior to the program evaluation data analysis.

5.1.2 Survey

Once the ARC.net database was updated, a survey was designed to collect information that would further inform the program evaluation of ARC's job creation and retention efforts. The project team agreed that the survey would include general questions seeking information on project outputs and outcomes, but also specific questions based on project type. The project-type questions sought more qualitative detail regarding the beneficiaries, goals, and impacts of the project. To ensure as complete a response as possible, delivery of the survey would be offered in a number of different ways. Details related to survey design and implementation are presented below.

Design and Testing

A draft survey instrument was constructed by the project team. The survey asked respondents to categorize their project type, how the project was carried out, and whom or what benefited the most from the projects. Quantitative questions regarding a variety of measures, particularly jobs created and retained, were included, along with qualitative questions asking respondents to rate the long-term impact of their project on a number of community well-being measures, from economic strength to environmental sustainability. The survey sought to elicit a range of responses for all projects, as well as some responses pertaining to specific project types. A copy of the survey instrument is provided in Appendix 1 of this report.

Prior to sending the survey to the full list of grantees, a "test run" was administered to seek feedback regarding the questions. Before the "test run," the project team's internal statistician reviewed the survey instrument and revisions were made based on her review. The final survey was then provided to some of the program evaluation case study candidates for review and feedback. The feedback received was incorporated into the survey, and edits were made as necessary before the survey was delivered to the full set of grantees.

Survey Implementation

Once the survey was tested and finalized, it was sent to all grantees that received job creation and retention project funding from ARC between FY 2004 and FY 2010. Based on the information in the database and in an attempt to be consistent with other program evaluations, such as those for education and infrastructure, the team distributed the survey electronically, via e-mail, to all grantees.

The electronic correspondence included: information about the survey purpose and background; how to access the survey on-line via Survey Monkey; information regarding the relevant project number, project title, year of funding, and project type; and a request

for participation. In this correspondence, respondents were also given the option of filling out the attached survey and returning by mail. For those e-mails that were undeliverable, or recipients that did not provide a response, strategic follow-up efforts were made. The follow-up process entailed:

1. Initial follow-up telephone call
2. Initial follow-up email
3. Second follow-up email from ARC's program director
4. Final telephone call

Efforts to pursue responses were carried out for five consecutive months, and were ended after the final round of calls. Follow-up efforts had a substantial impact on response rates; 31 responses were received initially and 110 additional responses were received after the follow-up process was complete. The majority of responses were received via the Survey Monkey data collector. In some instances, respondents emailed their responses directly to the survey administrator, who then input the information into the Survey Monkey database.

Of the 286 job creation and retention program grantees, the team received 123 responses with sufficient information to analyze, based on a review for erroneous, blank, or duplicated responses. There were 138 survey responses in total, but 15 were either blank or duplicate, and thus not counted.

5.2 Performance Measure Database

Prior to conducting the data analysis for the program evaluation, the project team appended the information collected from the survey to the original data provided in the ARC.net database at project onset. This combined performance measure database was used to evaluate the success of the projects in achieving ARC's goals and objectives related to job creation and retention, as well as other qualitative factors. This section provides detail related to the combination of the ARC.net and survey databases to develop the full performance measure database.

5.2.1 Construction of Survey Database

Survey responses were collected through Survey Monkey and exported to Microsoft Excel as a first step in developing the survey database. A review of the data was then conducted. Several challenges were encountered during the data review.

Some respondents left answers blank or did not know the outcome or benefits of the project. Clarification was sought with individual respondents when deemed necessary by the survey administrator. This process enabled the administrator to aggregate duplicate responses and ascertain a firm response where vague or indirect responses were initially provided. For example, some respondents indicated a number of part-time jobs, but it was not clear whether a part-time job was half of a full-time job. Other explanations were also required to ensure that the information collected was as accurate as possible. To clarify, the administrator contacted the respondents and adjusted the initial survey response to reflect the guidance provided.

Project titles and project numbers as provided by respondents were checked against the ARC.net database, and occasionally amended to ensure accuracy and conformity. Without this step, it would not have been possible to append the survey data to the original ARC.net data, which was critical for the analysis. Because some survey questions were specific to a given project type, and because respondents did not always categorize their projects the same way that they were categorized by the evaluation team, counts and sums by project-type are based on the evaluation team's project type definitions, unless otherwise noted.

5.2.2 Performance Measure Database Development

After cleaning the response data, this information was then appended to the ARC.net database in order to show the survey responses as a subset of the total database of projects. PivotTables were used to ensure the accuracy of counts and sums for all relevant question responses, including project types, jobs created, jobs retained, and so forth. These tables were then checked against the Survey Monkey response data for conformity.

5.3 Analysis and Summary of Project Performance Measure Database

The project team examined a wide range of performance measures in order to assist ARC staff, managers, and grant applicants in the process of evaluating the benefits of the program as clearly and transparently as possible.

The analysis focuses on three key areas:

- **How is the program funding spent?** These measures describe how ARC has made investments across several dimensions, including by state, by project type, and by year.
- **What are the real impacts of the program?** These measures evaluate economic development impacts, such as jobs created/retained, businesses created/retained, households/businesses improved, communities served, and so forth.
- **How do recipients perceive program benefits?** These measures describe how grant recipients perceive the long-range impacts of the projects on the economy, the environment, and the quality of life in the communities.

The 286 job creation and retention projects represent roughly \$42.5 million in ARC investment between FY 2004 and FY 2010. Based on the survey responses, a total of 123 projects at least partially funded by ARC during this time period were evaluated in detail by the project team. Projects for which survey responses were received represent \$20.7 million of ARC funding from FY 2004 to FY 2010. It is important to note that this information and the following detailed analysis is strictly based on the responses to the survey, and as highlighted in the previous section, the characteristics of the projects for which surveys were completed may vary from the characteristics of the overall investments funded during the relevant time period by ARC.

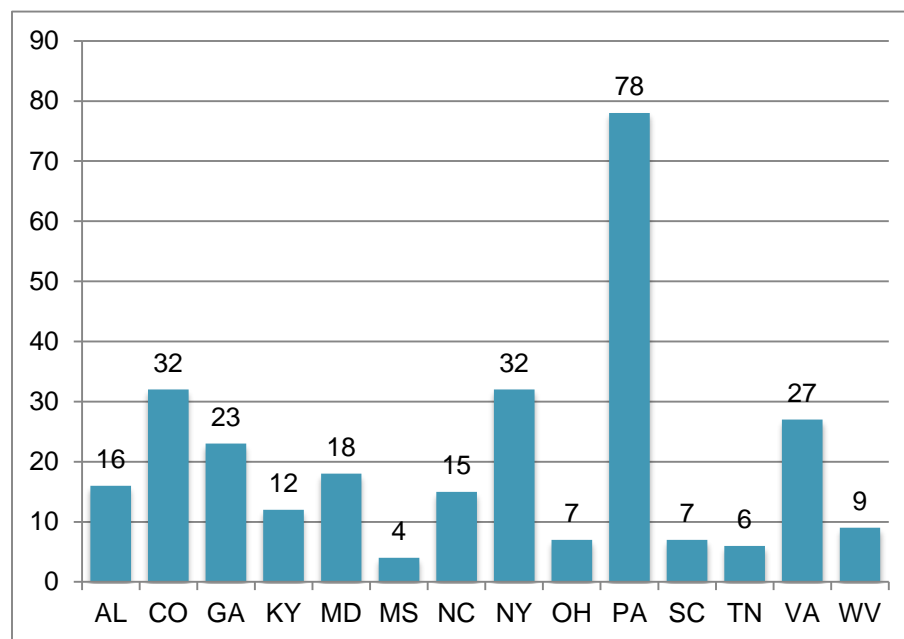
5.3.1 Characteristics by State, All Funded Projects

For consistency with ARC reporting measures, project states are classified by the state indicated in their ARC Project number, as reported in the ARC.net database. Thus, "CO" denotes "Commission" projects rather than the traditional state abbreviation for Colorado. The Commission projects are labeled as such because they are funded directly with Commission funds rather than the specific state's allocations. These projects sometimes, though not always, cover multiple states.

Number of ARC Funded Projects by State

The ARC.net database included 286 job creation and retention projects funded during the FY 2004 to FY 2010 period. As shown in Figure 1 and Table 3 below, Pennsylvania, with 78 projects (27.3 percent), received the largest number of grants overall, followed by New York, and Commission projects with 32 (11.2 percent) each. Pennsylvania's particularly high number of grants is largely due to the Enterprise Development Programs. These long-running programs were renewed on an annual basis throughout the duration of the FY 2004 to FY 2010 study period, and account for 50 (50.6 percent) of Pennsylvania's job creation and retention projects in the ARC.net database; greater detail on Enterprise Development Programs is provided later in the report.

Figure 1: Total ARC Job Creation and Retention Projects by State, Full Database



Source: ARC.net database

Survey responses were received from every state in the Appalachian Region, as well as Commission projects. North Carolina and Pennsylvania accounted for the highest response rates with 73.3 percent and 52.6 percent of all grantees in their state, respectively. The total number of grants awarded by state, based on ARC.net, and the total number of surveys received are shown below. The overall response rate was 43 percent. The distribution of responses by state compared to grants provided by state is relatively consistent, though South Carolina and Georgia are slightly under-represented

in the responses and North Carolina and Pennsylvania are slightly over-represented. These differences are not expected to materially impact the results of the analysis.

Table 3: Number and Share of Grants & Survey Responses Received by State

State	# Total Database Projects	% Total Projects	# Survey Responses	% Survey Responses	Response Rate Relative to State Share
AL	16	5.6%	6	4.9%	37.5%
CO	32	11.2%	13	10.6%	40.6%
GA	23	8.0%	6	4.9%	26.1%
KY	12	4.2%	6	4.9%	50.0%
MD	18	6.3%	8	6.5%	44.4%
MS	4	1.4%	2	1.6%	50.0%
NC	15	5.2%	11	8.9%	73.3%
NY	32	11.2%	10	8.1%	31.3%
OH	7	2.4%	2	1.6%	28.6%
PA	78	27.3%	41	33.3%	52.6%
SC	7	2.4%	1	0.8%	14.3%
TN	6	2.1%	3	2.4%	50.0%
VA	27	9.4%	11	8.9%	40.7%
WV	9	3.1%	3	2.4%	33.3%
Total	286	100.0%	123	100.0%	--

Source: ARC.net database and survey response data

Dollars of Investment by State

As shown in Table 4, Pennsylvania received the largest share of ARC funding – \$20.4 million of the \$42.5 million for job creation and retention programs – consistent with the large number of programs funded in the state. Enterprise Development Programs accounted for \$17.8 million, 87 percent, of Pennsylvania's funding during this time period. North Carolina, Georgia, Kentucky, and Virginia all received greater than \$2 million in ARC investment for job creation and retention between FY 2004 and FY 2010, while the remaining states received less than \$2 million in funding during the same time frame. The survey responses accounted for nearly half of all funding during the time period. Of all states, the relative shares of survey responses for South Carolina, Ohio and Tennessee were proportionally lower than the relative shares of projects in the ARC.net database.

Table 4: ARC Investment by State, in Millions of Dollars¹⁵

State	Total Database Projects	% Total Projects	Survey Responses	% Survey Responses
AL	\$1.4	3.3%	\$0.5	2.4%
CO	\$1.7	3.9%	\$0.6	3.1%
GA	\$2.8	6.6%	\$0.9	4.3%
KY	\$2.2	5.1%	\$1.1	5.3%
MD	\$1.4	3.3%	\$0.8	3.7%
MS	\$0.5	1.1%	\$0.3	1.4%
NC	\$3.1	7.3%	\$1.7	8.1%
NY	\$2.0	4.7%	\$0.9	4.2%
OH	\$0.8	1.8%	\$0.1	0.4%
PA	\$20.4	47.9%	\$11.9	57.4%
SC	\$1.0	2.4%	\$0.1	0.5%
TN	\$0.9	2.0%	\$0.2	0.9%
VA	\$2.8	6.5%	\$0.8	3.8%
WV	\$1.7	4.1%	\$1.0	4.6%
Total	\$42.5	100.0%	\$20.7	100.0%

Source: ARC.net database and survey response data

5.3.2 Characteristics by Project Type

Number of Projects by Project Type

One of the most important elements of the program evaluation is gaining an understanding of the outcomes and outputs for particular types of job creation and retention projects. The performance measure database (“Total Projects” in the tables below) developed for the program evaluation includes projects distributed among all 13 Appalachian states (plus the Commission projects), as well as a wide range of job creation and retention programs, including business or training programs, local food projects, and energy sustainability projects, among others.

Survey respondents were provided with the project type as categorized by the team, but they had the opportunity to identify what they believed to be their project type; some differences arose between respondents’ self-reported project types, and those project types categorized by the project team.

The largest number of projects funded fall within the business/training project category, with a total of 144 of the 286 total database projects. Of the 123 projects analyzed (those with survey responses), 70 projects, or 56.9 percent, are categorized as Business/Training, as shown in Table 5. Community Building/Tourism-focused projects received the second greatest number of grants, a total of 50, and also accounted for the second largest number of survey responses, 17. The table below shows the distribution of all 286 projects, as well as the 123 survey responses, by database project type.

¹⁵ Please note that totals may not add due to rounding.

Table 5: Job Creation and Retention Project Distribution by Database Type

Project Type	Total Database Projects	% Total Projects	Survey Responses	% Survey Responses
Business/Training	144	50.3%	70	56.9%
Child Care/Education	16	5.6%	9	7.3%
Community Building/Tourism	50	17.5%	17	13.8%
Energy/Environmental	18	6.3%	10	8.1%
Local Food	26	9.1%	7	5.7%
Planning/Research	32	11.2%	10	8.1%
Total	286	100.0%	123	100.0%

Source: ARC.net database and survey response data

When classified based on how respondents categorized their projects, there were some distributional differences, but Business/Training and Community Building/Tourism projects still represented the largest share of survey responses for the defined categories. Much of the difference between the two project type categorizations is attributable to the “other” category, which was presented as an option for respondents in the survey. Most of the respondents who chose “other” when asked how to categorize their project were Enterprise Development projects. In fact, 16 of the 37 “other” projects fell into this category. Enterprise Development projects are unique and likely difficult to categorize into a rigid project type. This may have led respondents to categorize their projects as “other” rather than one of the more specific project type categories.

As illustrated in Table 6, of the 123 projects for which survey data was received, 29.3 percent of surveys received were categorized as Business/Training projects by respondents. Community Building/Tourism comprised 17.1 percent of all survey responses. The largest category of responses fell into the “other” category, when respondents self-reported their project type.

Table 6: Job Creation and Retention Project Distribution by Self-Reported Type

Project Type	Total Database Projects	% Total Projects	By Survey Respondent Type	% Survey Responses
Business/Training	144	50.3%	36	29.3%
Child Care/Education	16	5.6%	8	6.5%
Community Building/Tourism	50	17.5%	21	17.1%
Energy/Environmental	18	6.3%	11	8.9%
Local Food	26	9.1%	4	3.3%
Planning/Research	32	11.2%	6	4.9%
Other	0	0.0%	37	30.1%
Total	286	100.0%	123	100.0%

Source: ARC.net database and survey response data

For purposes of consistency, **all data analysis presented in this program evaluation is based on the project team's more aggregate project types, rather than those given by the survey respondents or provided in the ARC.net database, except where specifically noted.** The analysis could have been conducted using either project type designation, but the large number of self-reported "other" projects, and project team concerns that the respondents for the Enterprise Development projects may have been uncertain about how best to categorize their projects, led the team to default to its project type definitions for the analysis. The project team designations were based on grant descriptions provided in ARC.net. As such, the team feels comfortable with its project type assignments, including Enterprise Development projects.¹⁶ In addition, using the project team project type designations increases the sample size for each of the more specific project type categories (e.g., Local Food, Business/Training, etc.).

Dollars of Investment by Project Type

As shown in Table 7, the survey responses accounted for \$20.7 million of the just under \$42.5 million that ARC invested in job creation and retention programs during the time period. A vast majority of this funding was invested in Business/Training programs. Receiving just short of \$28 million in ARC funding, Business/Training projects received 65.8 percent of total ARC job creation and retention funding. Community Building/Tourism projects received 14.4 percent of ARC funding, while Child Care/Education, Energy/Environmental, Local Food, and Planning/Research projects each received between three to seven percent of ARC funding.

The distribution of funding among survey responses generally mirrored that of the full set of projects funded during the time period. Business/Training projects are slightly over-represented while Community Building/Tourism and Local Food projects are slightly under-represented. The slight difference in distribution does not meaningfully impact the overall analysis results.

¹⁶ Note that Enterprise Development projects are considered separately as a subset of Business/Training projects for purposes of discussion. Inclusion of their results in the category specific breakdowns greatly skews outputs, thus they are separated.

Table 7: Job Creation and Retention Project Distribution by Dollars Invested, in Millions

Project Type	Total Database Projects	% Total Projects	Survey Responses	% Survey Responses
Business/Training	\$28.0	65.8%	\$15.6	75.3%
Child Care/Education	\$2.8	6.6%	\$1.3	6.2%
Community Building/Tourism	\$6.1	14.4%	\$1.9	9.4%
Energy/Environmental	\$1.5	3.5%	\$0.8	3.7%
Local Food	\$2.6	6.0%	\$0.6	3.0%
Planning/Research	\$1.6	3.8%	\$0.5	2.4%
Total	\$42.5	100.0%	\$20.7	100.0%

Source: ARC.net database and survey response data

Overall Economic Development Impacts

Another important aspect of the evaluation is examining real, tangible economic development impacts, such as jobs created or retained, and businesses created or retained by state and project type. The limited set of completed surveys leaves some investment categories and states without sufficient impact data to adequately analyze the effects of ARC projects. In addition, it is important to note that not all of the respondents to the survey tracked or provided answers to every measure.

Based on the survey responses for which sufficient data were available, ARC job creation and retention investments created and/or retained a total of more than 237,000 jobs. This total is primarily driven by a few projects in a small number of states.

Receiving almost six times the next greatest amount of ARC funding during the study period, Pennsylvania created and retained the most number of jobs by far, with over 55,000 jobs created and over 178,000 retained. Of these, Enterprise Development Programs contributed to approximately 51,000 jobs created and 176,000 jobs retained.¹⁷

Examining only the 123 projects for which survey responses were received, projects that received funding from ARC between FY 2004 and FY 2010 contributed to the creation of 776 business establishments, and the retention of 3,427 businesses, as shown in Table 8 below. ARC investments contributed to the largest number in Pennsylvania, with a total of 555 new businesses established, and nearly 3,100 retained; of these, Enterprise Development Programs contributed to the creation of 430 businesses and the retention of 2,884 businesses.

¹⁷ It should be noted that these values were primarily provided by the Southwestern PA Enterprise Development Program. At this time, the team is attempting to seek detail regarding the nature of these responses and how they were generated.

Table 8: Key Project Outcomes, All Project Types

Project Type	Jobs Created	Jobs Retained	Businesses Created	Businesses Retained	Leveraged Private Investment (\$ millions)
Business/Training	58,158	177,688	668	3,093	\$362.3
Child Care/Education	48	43	25	48	\$2.4
Community Building/Tourism	193	561	14	6	\$30.8
Energy/Environmental	348	39	23	5	\$9.1
Local Food	169	548	32	271	\$0.7
Planning/Research	111	19	14	4	\$17.5
Total	59,026	178,897	776	3,427	\$422.7

Source: Survey response data

The business establishment outcomes were primarily the result of Business/Training programs, accounting for 668 of 776 newly established businesses.

In addition to impacts on jobs and businesses, ARC investments also contributed to improvements to households. Based on survey responses, ARC job creation and retention investments improved 12,019 households. Nearly seventy-five of these households were the result of the Beaver Falls Downtown Revitalization Project, which sought to remake Main Street in rural Beaver Falls, Pennsylvania. Based on survey responses, ARC job creation and retention investments also resulted in 4,946 unique businesses served.

ARC contributed nearly \$43 million in funding to job creation and retention projects from FY 2004 to FY 2010. According to survey respondents, these projects leveraged an additional \$422.7 million in private investments. The survey did not collect any detailed information on the components, sources or uses of the leveraged private investment.

Findings by Project Type

Given the wide variety of projects considered in this evaluation, additional detail of the results by project type is provided below.

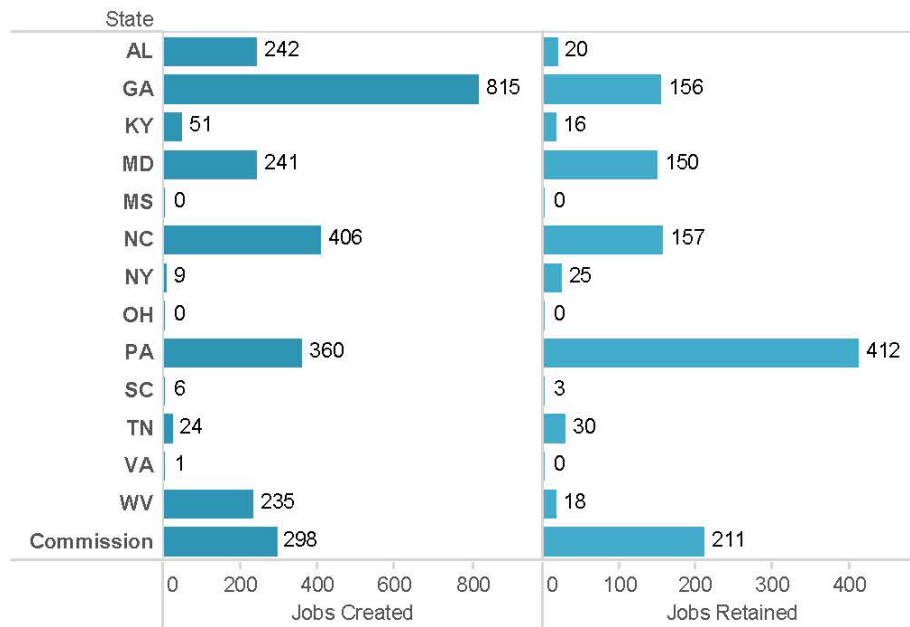
Business/Training

This category of projects represents any project that creates a business or incubator for an industry not listed in other categories. These projects may also train employees or adults who are not considered students. Though all Enterprise Development projects were categorized as Business/Training, these projects are excluded below and analyzed separately due to their large reported impacts, creating a distortion in the overall results.

Of the 286 total job creation and retention projects in the ARC.net database, 144 were categorized as "Business/Training" projects based on the project team's classification of the projects, including 50 Enterprise Development projects. Of the 123 total survey responses, 40 responses (32.5 percent) were for non-Enterprise Development Business/Training projects.

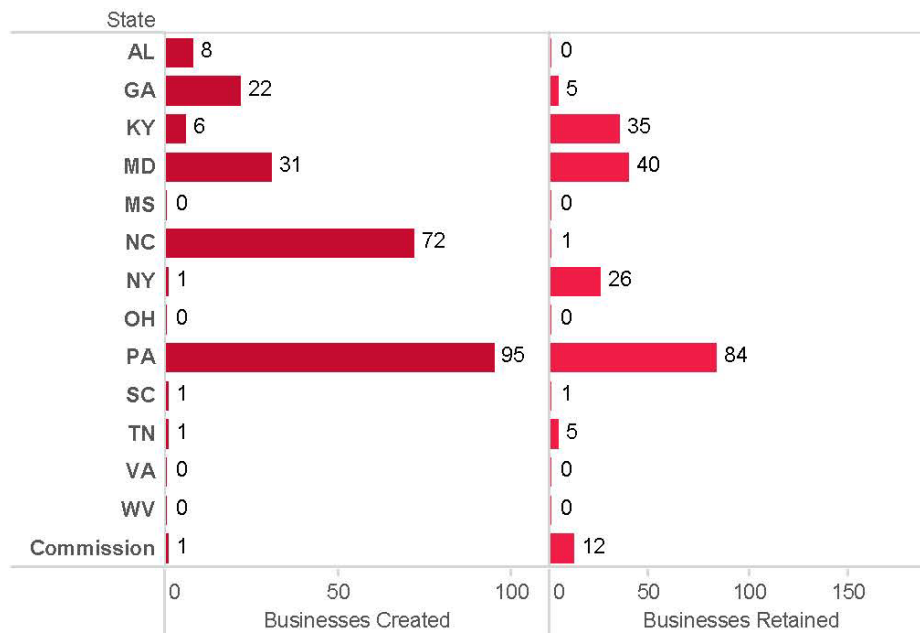
Based on survey responses, non-Enterprise Development Business/Training projects received \$10.2 million in ARC funding. These projects created 2,688 new jobs, retained 1,198 jobs, created 238 new businesses, and retained 209 existing businesses. Figures 2 and 3 illustrate the findings by state.

Figure 2: Business/Training Projects, Jobs Created and Retained (n=40)



Source: Survey results database

Figure 3: Business/Training Projects, Businesses Created and Retained (n=40)

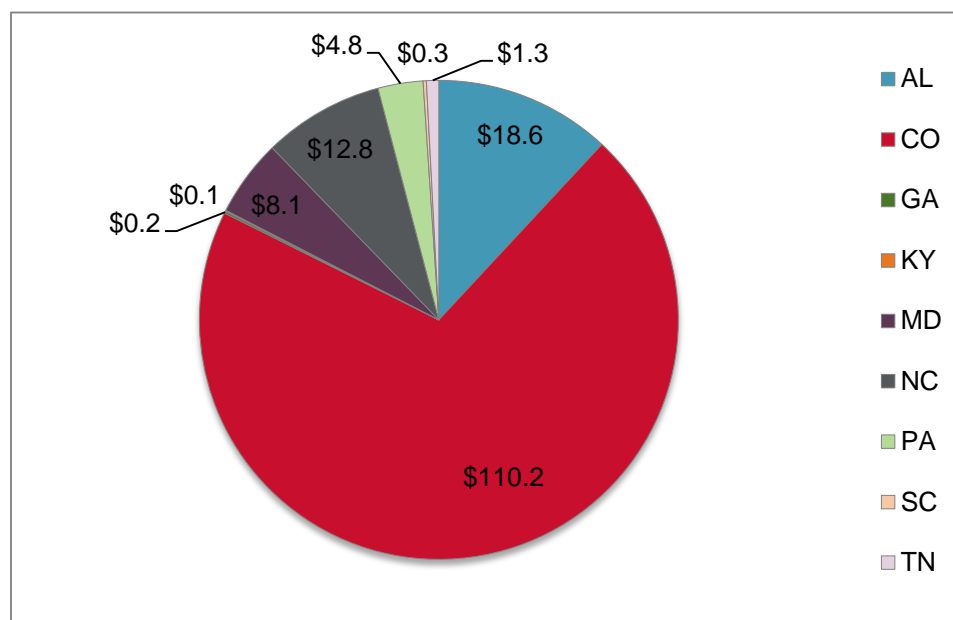


Source: Survey results database

Additionally, non-Enterprise Development Business/Training projects served nearly 1,100 businesses and leveraged roughly \$156.4 million in private investment (see Figure 4). Compared to other project type categories, Business/Training received the greatest

number of grants and the greatest amount of funding. They also had the most notable economic impacts among the different project types.

Figure 4: Business/Training Projects, Leveraged Private Investment, \$ millions (n=40)



Source: Survey response data

In addition to the quantitative impacts associated with the business/training projects, survey respondents also provided feedback regarding additional activities undertaken by the project that may not be captured in the output and outcome measures. Unlike the findings presented above, which were based on the **project team's** definition of a project type, these findings are based on the **survey respondent's** classification of their project, as these questions were specific to the nature of the grant. The Business/Training projects exclude the Enterprise Development Programs, where self-identified, for the purposes of this qualitative results presentation.

In the area of education and training, 14 of the 22 survey respondents indicated that their project provided instruction in business management. The business and training projects were particularly beneficial in the area of community outreach, establishing community or business partnerships as a component of 18 projects, and providing community outreach activities as a component of nine of the projects. Nine projects increased community capacity by aiding in implementation of outcome-based community or economic development activity. These projects were also particularly beneficial to entrepreneurs, with 15 of the projects working with entrepreneurs to develop business plans, and 21 projects providing entrepreneurship education at some level between school age and adults. Technical assistance also played a vital role, with 13 projects assisting businesses in developing marketing strategies and eight providing expertise in the areas of finance or accounting.

ENTERPRISE DEVELOPMENT PROGRAMS

These long-running programs were renewed on an annual basis throughout the duration of the FY 2004 to FY 2010 study period. All Enterprise Development Programs were

categorized as Business/Training projects. There were seven unique Enterprise Development Programs, all based in Pennsylvania, that account for 50 (60.2 percent) of Pennsylvania's grant projects in the ARC.net database.

The number of Enterprise Development Program grants is greater than the number of grants for all project type categories other than Business/Training (of which they are a subset) and Community Building/Tourism. These programs had a substantial outlier impact on our survey results, representing a bulk of ARC funding, and tracked outcomes (jobs created, jobs retained and so forth). By themselves, Enterprise Development Programs created roughly 51,000 jobs and retained another 176,000 jobs. The vast majority of these jobs were associated with the Southwest Pennsylvania Enterprise Development Program.

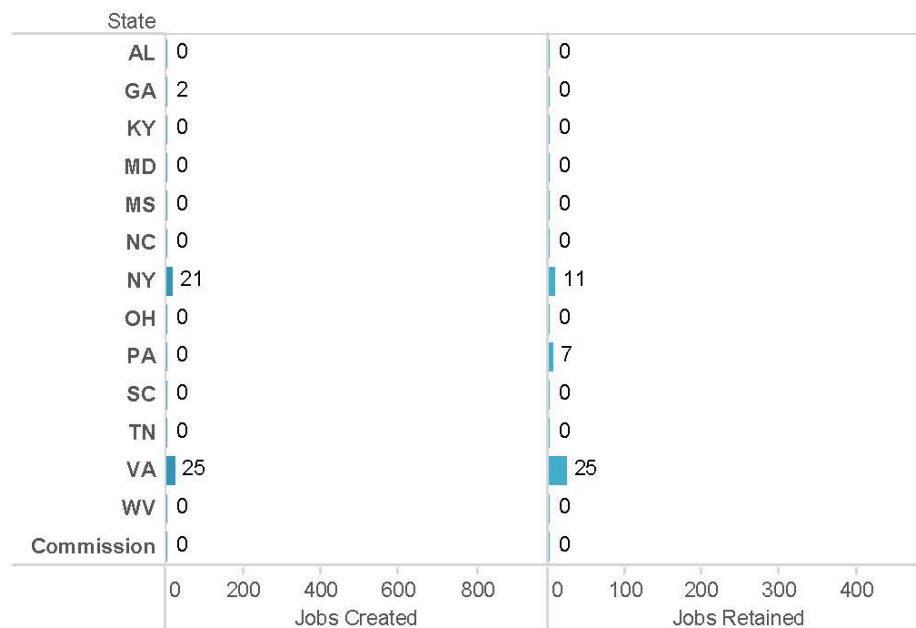
Child Care/Education

This category of projects represent any project looking to build or expand a school, design a new class or curriculum, set up a day care, or benefit children or students in some other way. These projects were not included in a previous ARC evaluation of education grant programs, as they tend to reflect supplemental education rather than traditional schooling.

Of the 286 total job creation and retention projects in the ARC.net database, 16 were categorized as "Child Care/Education" projects. Of the 123 total survey responses, 9 responses (7.3 percent) were for Child Care/Education projects. Figures 5 and 6 illustrate the findings.

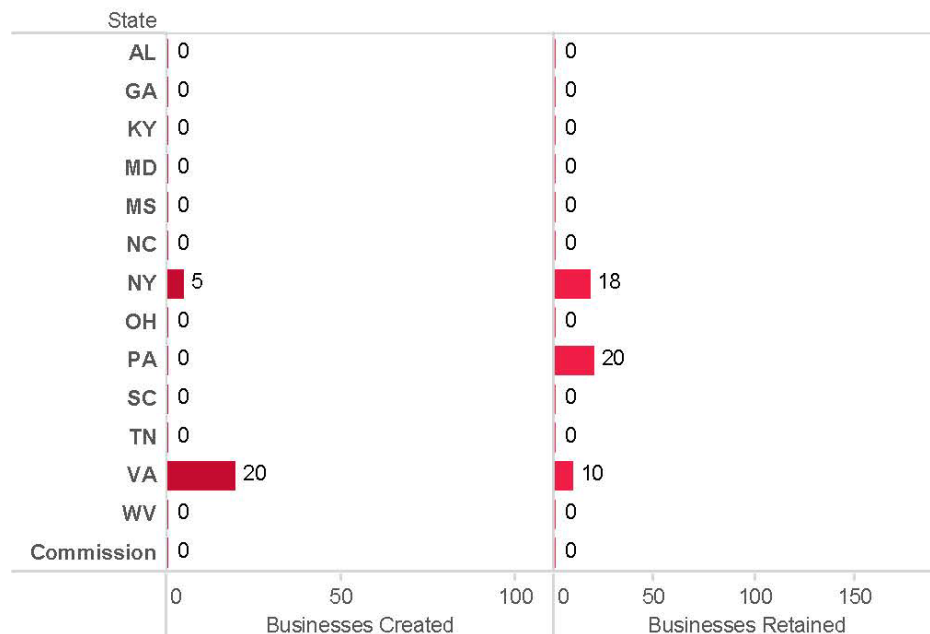
Those that responded to the survey accounted for \$1.3 million of the \$2.8 million in funding for Child Care/Education projects. These projects created 48 new jobs, retained 43 jobs, created 25 new businesses, and retained 48 existing businesses.

Figure 5: Child Care/Education Projects, Jobs Created and Retained (n=9)



Source: Survey response data

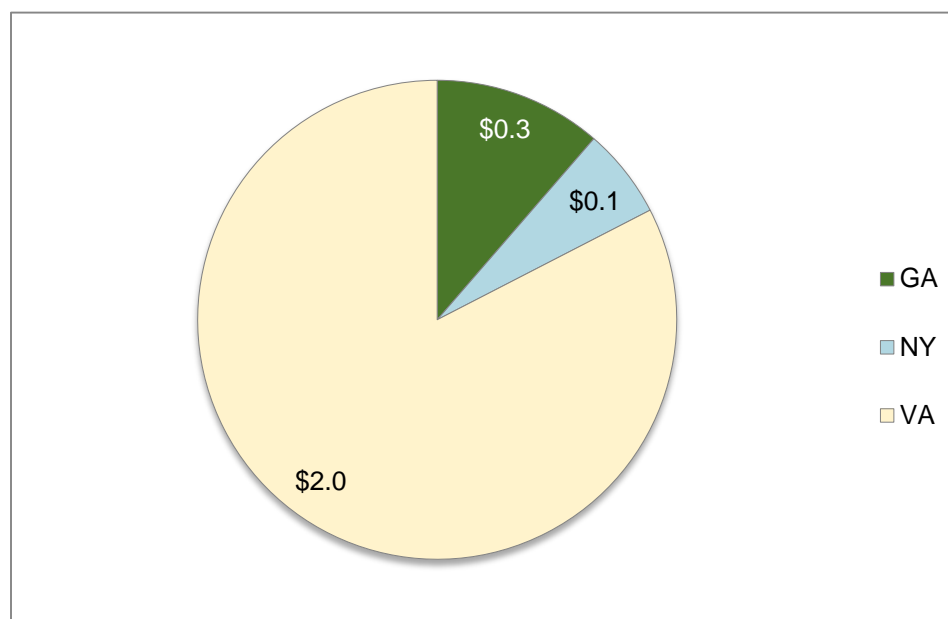
Figure 6: Child Care/Education Projects, Businesses Created and Retained (n=9)



Source: Survey response data

In addition, Child Care/Education projects served 198 businesses, and leveraged over \$2.4 million in private investment, as presented in Figure 7. Child Care/Education accounts for less than six percent of the total number of job creation and retention grants, and the results reported are consistent with the extent of the grants provided for this project category.

Figure 7: Child Care/Education Projects, Leveraged Private Investment, \$ millions (n=9)



Source: Survey response data

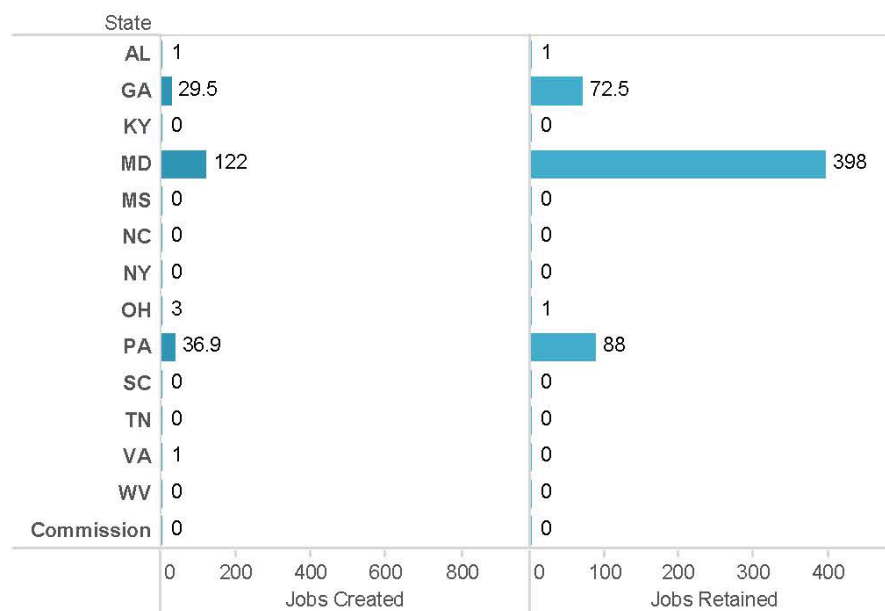
As with all of the other project types, specific questions were asked of the grant recipients regarding additional beneficiaries or activities undertaken by their project. The nine respondents indicated that their projects were primarily focused on the purchase or development of educational materials and curriculum or manuals. They also developed educational programs and provided financial assistance.

Community Building/Tourism

This category of project represents any project that looks to build, renovate or market tourist attractions, or repair local infrastructure. Of the 286 total job creation and retention projects in the ARC.net database, 50 were categorized as “Community Building/Tourism” projects. Of the 123 total survey responses, 17 responses (13.8 percent) were for Community Building/Tourism projects.

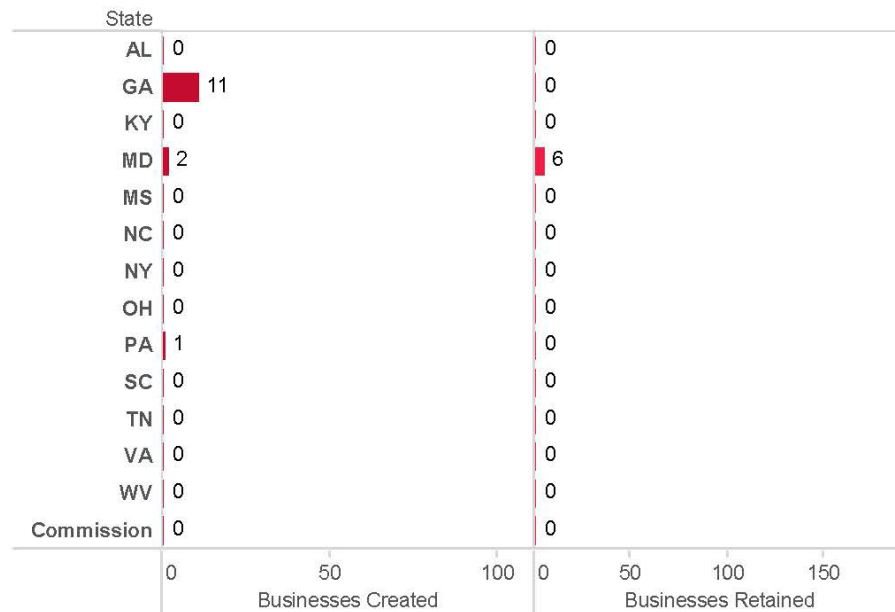
The survey responses accounted for \$1.9 million of the \$6.1 million in funding for Community Building/Tourism projects. These projects created 193 new jobs, retained 561 jobs, created 14 new businesses, and retained 6 existing businesses (Figures 8 and 9). Many of the jobs created and retained were associated with the Upper Potomac Industrial Park Flood Protection program in Maryland.

Figure 8: Community Building/Tourism Projects, Jobs Created and Retained (n=17)



Source: Survey response data

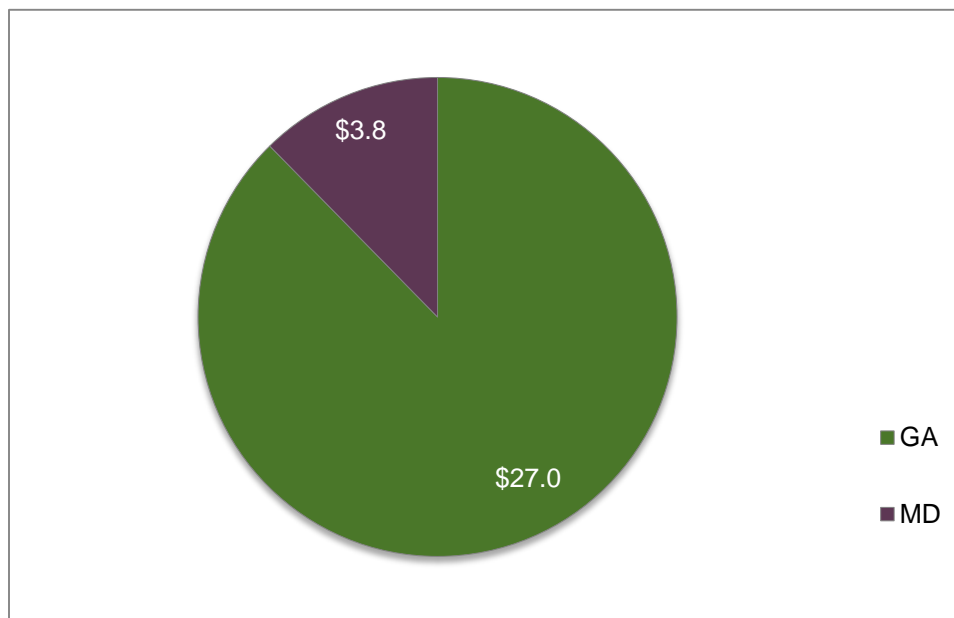
Figure 9: Community Building/Tourism Projects, Businesses Created and Retained (n=17)



Source: Survey response data

Additionally, Community Building/Tourism projects served 163 businesses, and leveraged roughly \$30.8 million in private investment, as shown in Figure 10. Community Building/Tourism projects received the second greatest amount of ARC funding for job creation and retention programs, and ranked second-or-third highest outcomes for all of the measures provided in the above paragraph, except for businesses retained.

Figure 10: Community Building/Tourism Projects, Leveraged Private Investment, \$ millions (n=17)



Source: Survey response data

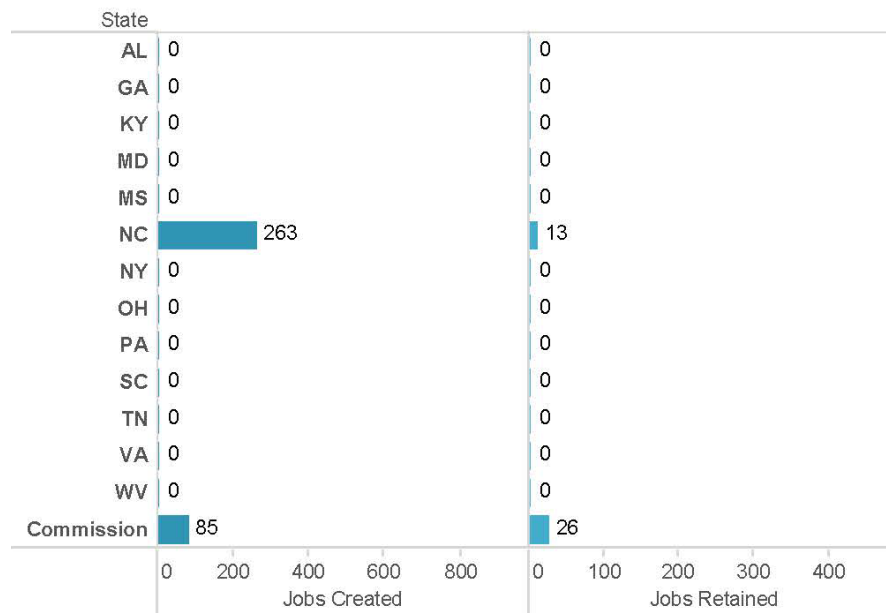
Of the 21 Community Building/Tourism projects, as classified by survey respondents, seven supported heritage, craft, or music trails and six provided planning for, design, or construction of new attractions. Four of them provided new community facilities through the construction of a community center, day care, or theater.

Energy/Environmental

This category of project represents any project that seeks to build a power plant, improve energy efficiency, or protect the environment. Of the 286 total job creation and retention projects in the ARC.net database, 18 were categorized as “Energy/Environmental” projects. Of the 123 total survey responses, 10 responses (8.1 percent) were for Energy/Environmental projects.

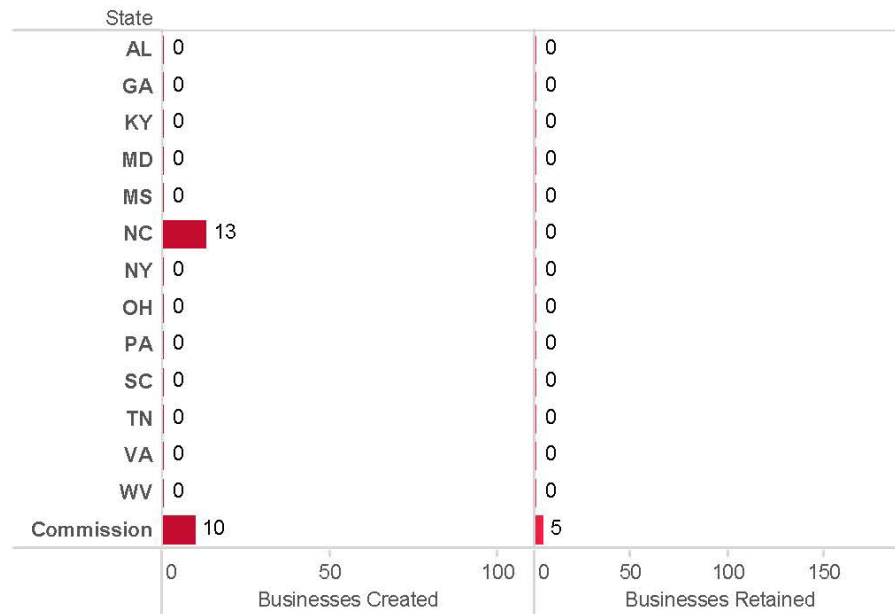
Survey respondents for Energy/Environmental projects received roughly \$757,000 of the \$1.5 million in ARC funding spent on this project type. As shown in Figures 11 and 12, these projects created 348 new jobs, retained 39 jobs, created 23 new businesses, and retained five existing businesses. Much of the job creation is attributed to the Building the Clean Energy Economy in Western North Carolina project.

Figure 11: Energy/Environmental Projects, Jobs Created and Retained (n=10)



Source: Survey response data

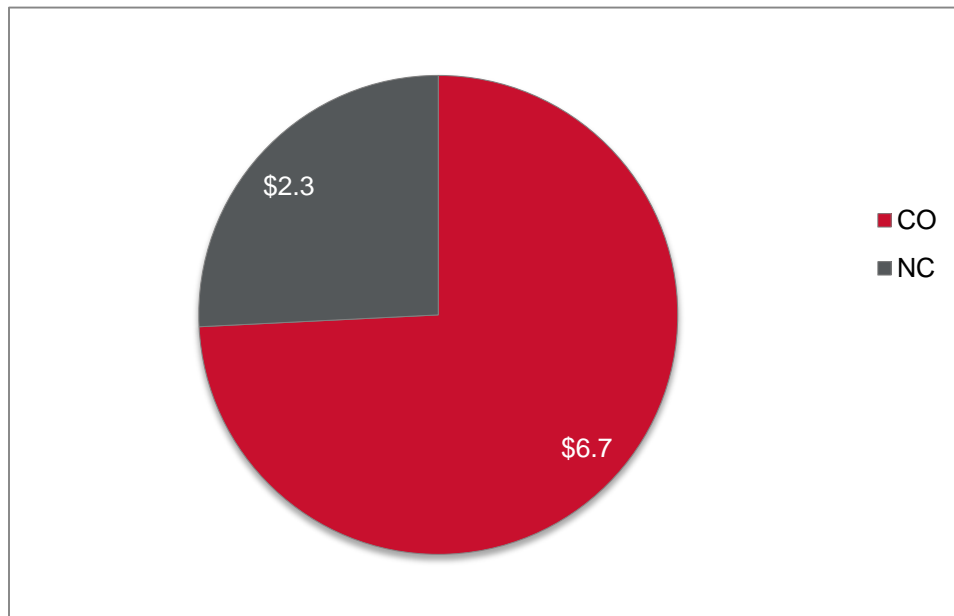
Figure 12: Energy/Environmental Projects, Businesses Created and Retained (n=10)



Source: Survey response data

Additionally, Energy/Environmental projects served over 375 businesses, and leveraged roughly \$9.1 million in private investment (Figure 13). Energy/Environmental projects received the least amount of total funding for job creation and retention investment.

Figure 13: Energy/Environmental Projects, Leveraged Private Investment, \$ millions (n=10)



Source: Survey response data

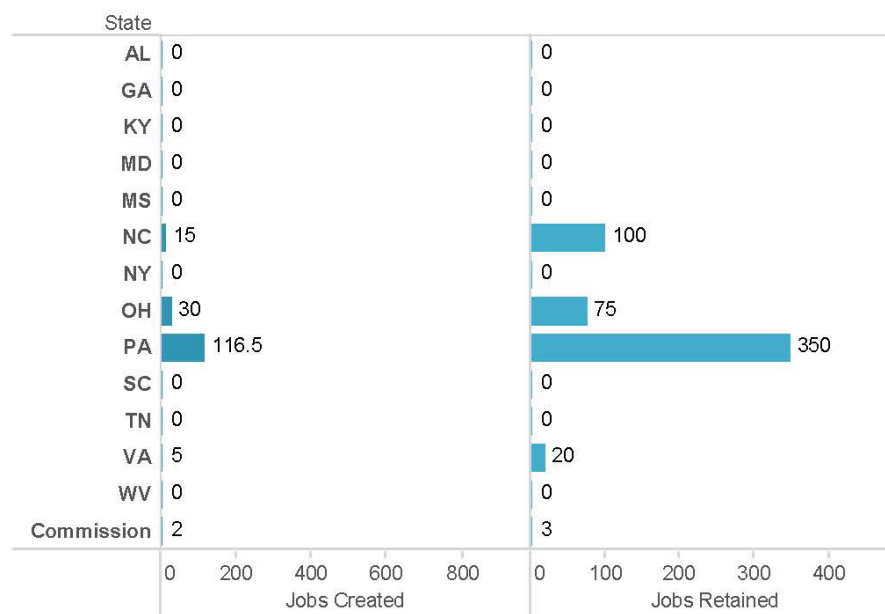
In general, the 11 respondents that classified themselves as energy or environmental did not identify with any of the qualitative characteristics presented to them. That said, one did indicate a community revitalization benefit of the hiring of a marketing coordinator.

Local Food

This category of projects represents any project that seeks to start or develop a farm, or a business, incubator, etc. in the field of agriculture or culinary arts. Of the 286 total job creation and retention projects in the ARC.net database, 26 were categorized as “Local Food” projects. Of the 123 total survey responses, seven responses (5.7 percent) were for Local Food projects.

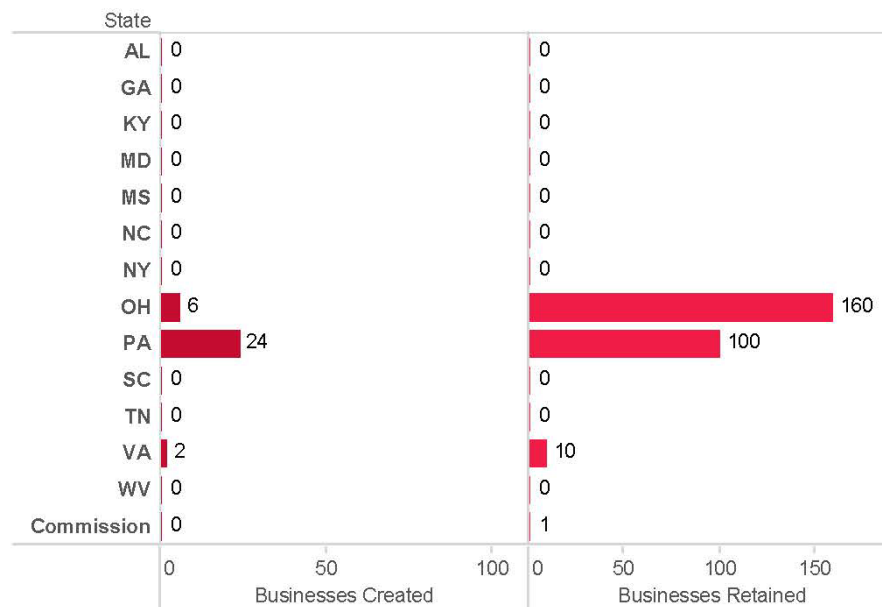
Survey responses for Local Food projects received roughly \$627 thousand of the \$2.6 million in ARC funding. These projects created 169 new jobs, retained 548 jobs, created 32 new businesses, and retained 271 existing businesses, as presented in Figures 14 and 15 below.

Figure 14: Local Food Projects, Jobs Created and Retained (n=7)



Source: Survey response data

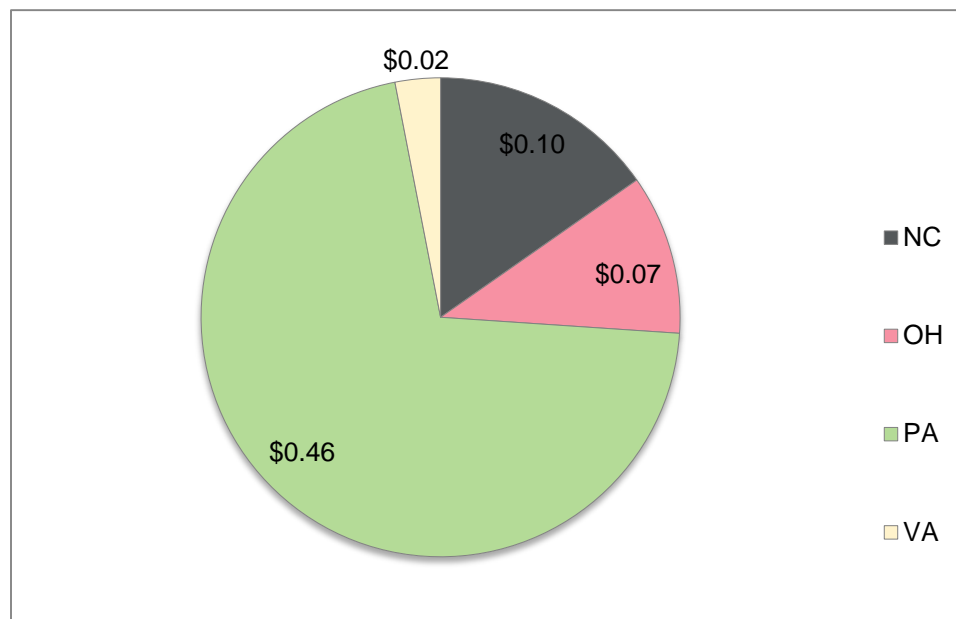
Figure 15: Local Food Projects, Businesses Created and Retained (n=7)



Source: Survey response data

Additionally, Local Food projects served over 150 businesses, and leveraged roughly \$654,000 in private investment (Figure 16).

Figure 16: Local Food Projects, Leveraged Private Investment, \$ millions (n=7)



Source: Survey response data

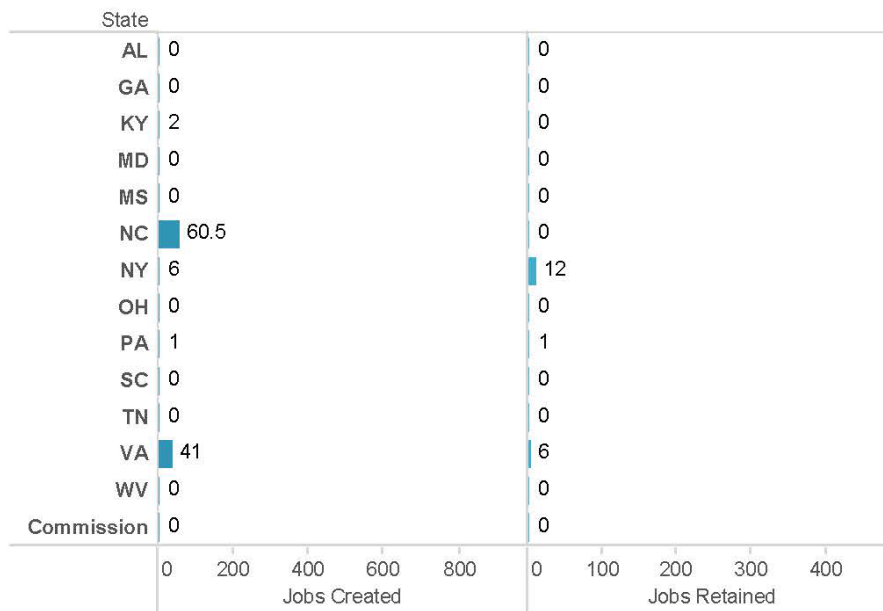
The four self-identified local food projects indicated additional project benefits in the area of technical assistance. Two of the respondents indicated that their grant allowed them to assist businesses in developing marketing strategies, and these two also indicated that the grant allowed them to work with potential entrepreneurs to develop a business plan.

Planning/Research

This category of projects represents any project that aims to develop a strategic plan, possibly associated with one of the other categories, or conduct a form of research. Of the 286 total job creation and retention projects in the ARC.net database, 32 were categorized as “Planning/Research” projects. Of the 123 total survey responses, 10 responses (8.1 percent) were for Planning/Research projects.

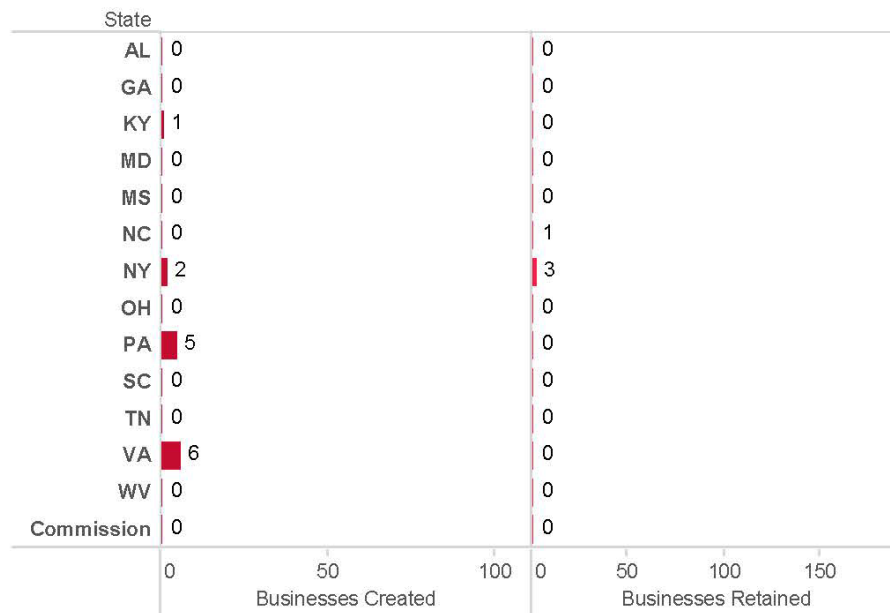
The survey responses for Planning/Research projects accounted for nearly \$500 thousand of the \$1.6 million in ARC funding allocated to this project type. These projects created 111 new jobs, retained 19 jobs, created 14 new businesses, and retained four existing businesses. Figures 17 and 18 present the results of the analysis for this project type.

Figure 17: Planning/Research Projects, Jobs Created and Retained (n=10)



Source: Survey response data

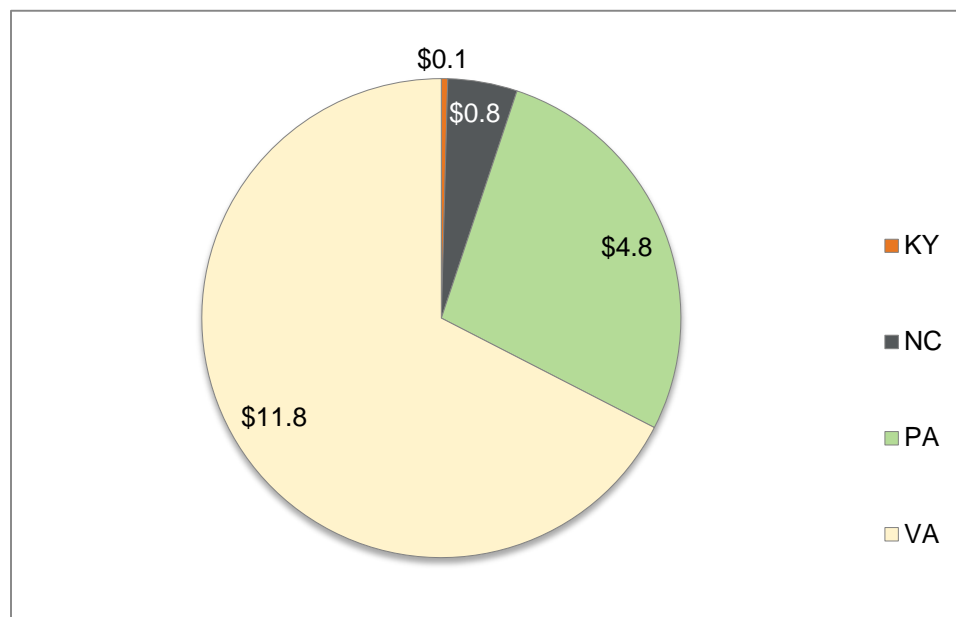
Figure 18: Planning/Research Projects, Businesses Created and Retained (n=10)



Source: Survey response data

Additionally, Planning/Research projects served over 370 businesses, and leveraged roughly \$17.5 million in private investment. The shares by state are provided in Figure 19 below.

Figure 19: Planning/Research Projects, Leveraged Private Investment, \$ millions (n=10)



Source: Survey response data

Planning/Research projects accounted for six of the self-identified responses. Two of these respondents indicated that their grant allowed for the funding of an economic impact study, one allowed for the improvement of education practices, and one allowed for an understanding of environmental impacts.

5.3.3 Anticipated vs. Actual Impacts

When applying for ARC funding, the prospective grantees are asked to estimate the impacts of their projects. An additional assessment of the success of projects is to examine the actual outcomes compared to the perceived outcomes. For purposes of this analysis, Enterprise Development Program projects were excluded from the anticipated and actual outcome comparisons. These projects tended to skew the impacts, as the information presented was typically modeled from an economic impact model rather than true observations. Where possible, this comparison was made for the 93 non-Enterprise Development projects that had survey responses. Some respondents did not track all of the measures, or left their response for a particular measure blank. The total number of projects with sufficient information for analysis on each measure is indicated in the rightmost column of Table 9. On the aggregate, all measures that were both predicted and reported by survey respondents exceeded the initial projections.

As seen in Table 9, respondents anticipated serving only 19 businesses and actually served more than 2,300; respondents also more than doubled the predicted number of businesses created. Job creation exceeded expectations, with 3,556 jobs created compared to 2,715 projected. Job retention more than doubled the predictions, with over 2,400 jobs actually retained compared to the just over 1,000 predicted. Lastly, the projects leveraged a substantial amount of private investment, with actual private investment leveraged at \$216.8 million, as compared to \$37.3 million predicted. More information would be required to determine the exact explanation for why actual outcomes were greater than predicted outcomes, but some possible explanations include a greater tendency for successful projects to report results, greater impacts due to a combination of ARC grants with additional outside investments or a misunderstanding of the question and possible double-counting.

Table 9: Predicted vs. Actual Outputs & Outcomes, Excluding Enterprise Development

	Predicted	Actual	Difference	# Projects Considered
Businesses Served	19	2,352	2,333	44
Businesses Created	147	346	199	47
Jobs Created	2,715	3,556	841	60
Jobs Retained	1,051	2,408	1,357	50
Leveraged Private Investment (\$ millions)	\$37.3	\$216.8	\$179.5	51

Source: Survey response data

5.3.4 Perceived Qualitative Project Outcomes

In addition to questions seeking quantitative data, the evaluation survey also contained questions to qualitatively assess the long-range project outcomes. These measures describe how grant recipients perceive the long-range impacts of the projects on the economy, the environment, and the quality of life of the communities. Grantees were asked a series of questions related to the project and asked to respond according to the following scale:

- **None:** Project had little to no impact on given measure
- **Slight:** Project impact was not large enough to reverse or stabilize measure's trend
- **Moderate:** Project impact contributed to the stabilization or reversal of measure's trend
- **High:** Project impact was responsible for significant improvement in measure's trend

Questions were asked regarding economic impacts, competitive impacts, environmental impacts, and quality of life impacts.

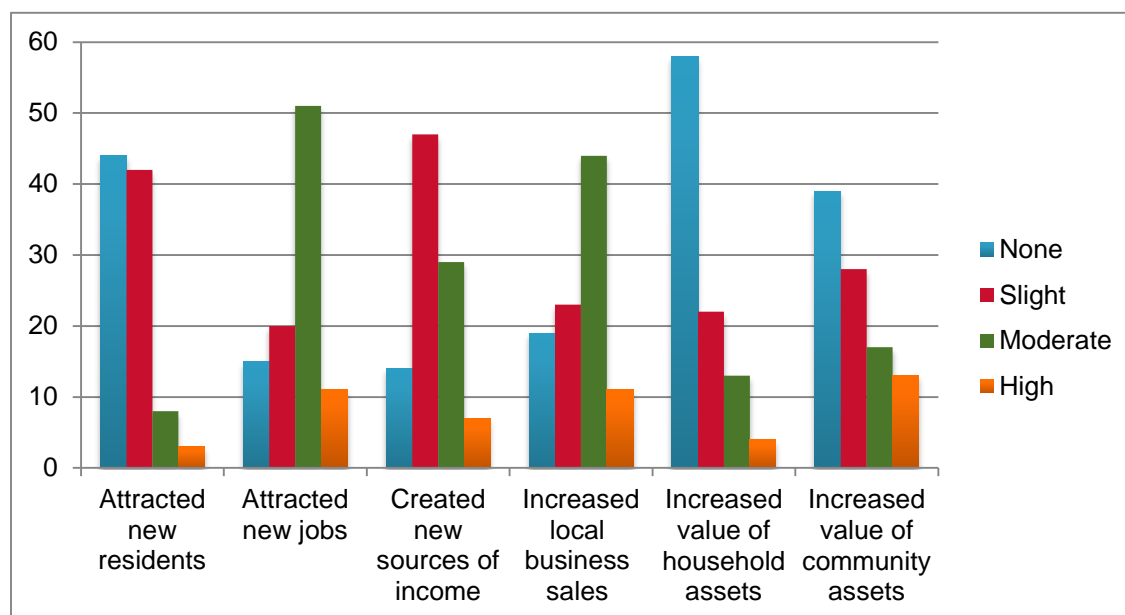
Ratings were sought to the following statements about long-term **economic impacts** of ARC projects:

1. Attracting new residents or stabilizing the area's population
2. Attracting new jobs or increasing employment at existing businesses
3. Creating new sources of income or increasing income for local residents
4. Increasing local business sales or the value of business assets (such as equipment, real estate)
5. Increasing the value of household assets (such as homes, land, farms) for local residents
6. Increasing the value of community assets (such as community buildings, schools, infrastructure, parks)

Economic Measures

Analyzing the 123 survey responses, 97 respondents provided information for qualitative questions related to economic measures. Specifically, respondents believed that their projects had the greatest impact on attracting new jobs and increasing local business sales. Though the highest portion of "high" responses were for the increased value of community assets, only 30 of the respondents rated these projects as "high" or "moderate," while 62 rated attracting new jobs and 55 rated increased local business sales as such. Projects were rated as having the least impact on attracting new residents. Given that the projects in this evaluation are focused on job creation and retention, these results are consistent with expectations. Results are depicted in Figure 20 below.

Figure 20: Qualitative Survey Responses: Economic Measures (n=97)



Source: Survey response data

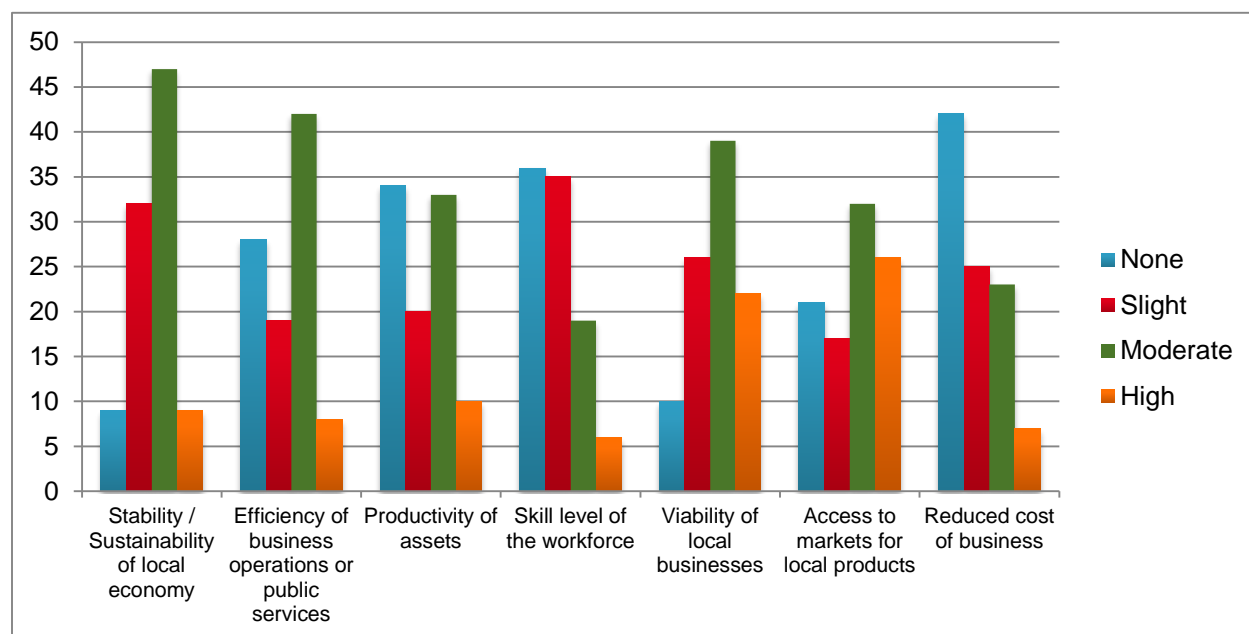
Competitiveness Measures

The second set of qualitative questions sought long-term outcomes related to the following **competitiveness measures**:

1. Improving the stability and sustainability of the local economy
2. Improving the efficiency of business operations or public services
3. Improving the productivity of students, employees, businesses, land, or other assets
4. Improving the skill level of the workforce
5. Increasing the viability of local businesses
6. Improving access to markets for local products, businesses, artisans, and entrepreneurs
7. Reducing the cost of doing business

An analysis of the survey responses shows that 97 respondents provided information related to these questions. Respondents believed that their projects had very significant positive impacts on stabilizing the local economy, improving the efficiency of business operations or public services, improving the viability of local businesses, and improving access to markets for local products, businesses, artisans, and entrepreneurs. Respondents indicated that their projects had minimal impact on reducing the cost of business. Figure 21 depicts the survey response results for competitiveness measures.

Figure 21: Qualitative Survey Responses: Competitiveness Measures (n=97)¹⁸



Source: Survey response data

Environmental Measures

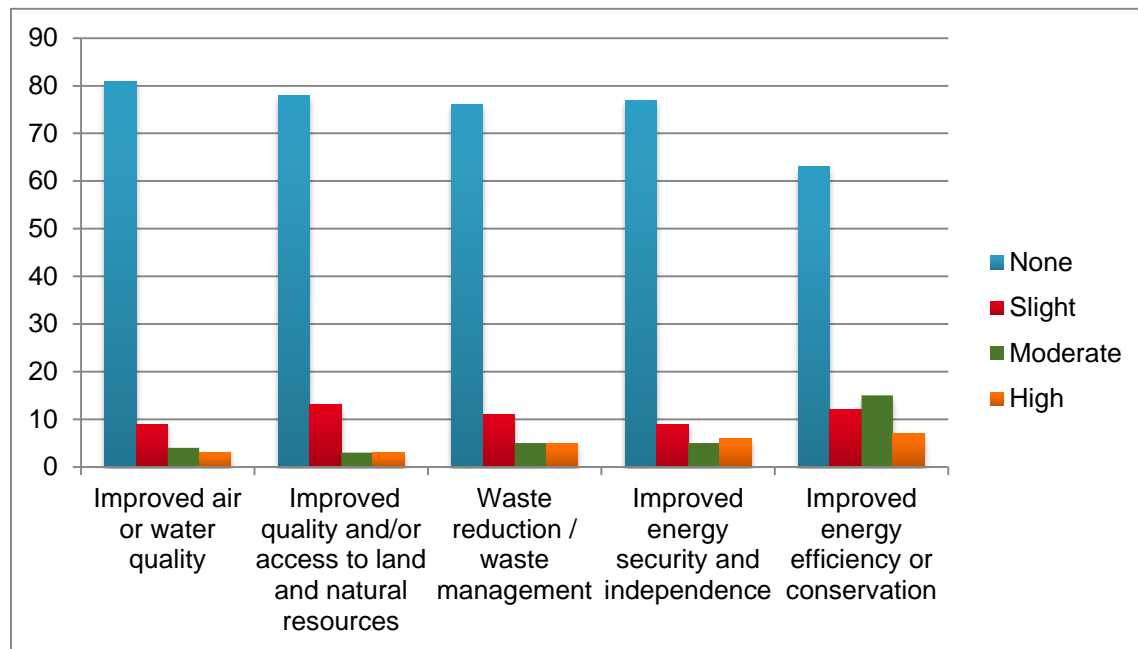
The third category of qualitative impacts related to **environmental measures** of the investments. Of the economic, competitiveness and environmental impacts, the 97 grantees who provided input found their projects to be the least successful at improving environmental outcomes overall. The following are the topics posed as questions that were presented to the grantees:

1. Impact on improving air or water quality
2. Impact on improving quality and/or access to land and natural resources
3. Impact on waste reduction or improving waste management (reuse, recycling, alternative energy, biofuels)
4. Impact on improving energy security and independence
5. Impact on improving energy efficiency or conservation

The job creation and retention programs evaluated herein were not bound to serve environmental improvement. Their priority was to create and retain jobs, rather than improve the environment although, in some cases, this objective was met. Not surprisingly, impacts on environmental measures were typically reported as “slight” or “none.” The environmental measure with the greatest positive impact was improving energy efficiency or conservation. Environmental response results can be seen in Figure 22.

¹⁸ Note that n=97 for all categories except “skill level of the workforce” and “access to markets for local products” where n=96.

Figure 22: Qualitative Survey Responses: Environmental Measures (n=97)



Source: Survey response data

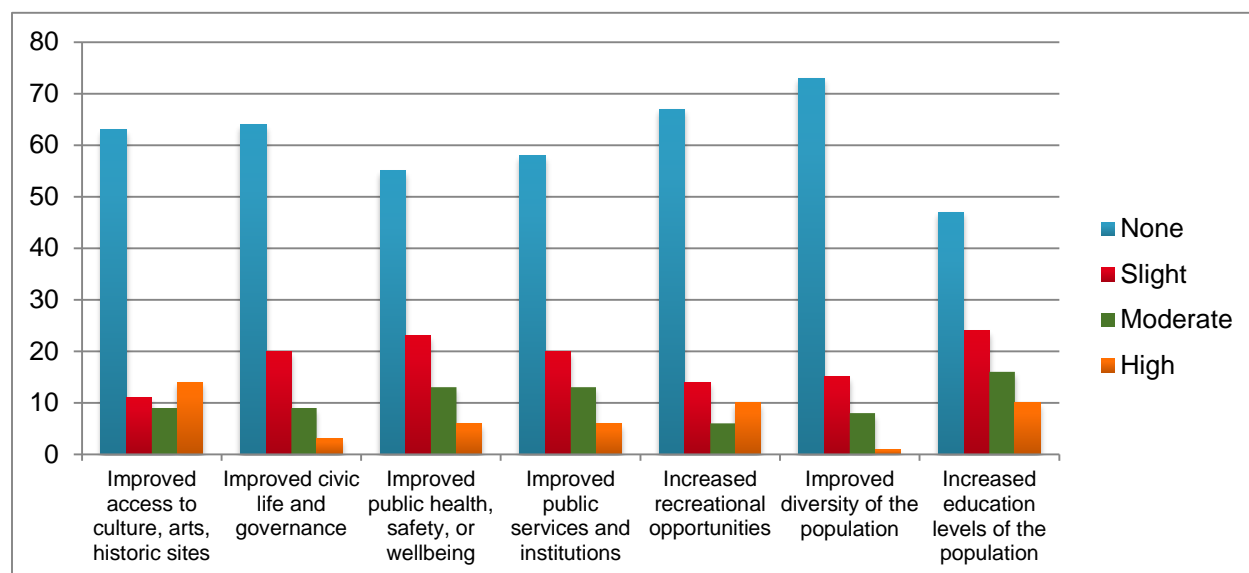
Quality of Life Measures

The final category of qualitative impacts related to the **quality of life measures** of the investments. The following are the topics posed as questions that were presented to the grantees:

1. Impact on improving access to culture, arts, or historic sites
2. Impact on improving civic life and governance
3. Impact on public health, safety, or wellbeing
4. Impact on improving public services and institutions
5. Impact on improving recreational opportunities
6. Impact on improving the diversity (age, gender, race, ethnicity, economic status) of the population
7. Impact on increasing knowledge and educational levels of the population

For these measures, 97 respondents provided information and reported that their projects had the greatest impact on increasing the educational levels of their population. Many projects had a focus on training workers, either through schooling or on-the-job training, so these results are consistent with expectations. The results for quality of life measures can be seen in Figure 23.

Figure 23: Qualitative Survey Responses: Quality of Life Measures (n=97)¹⁹



Source: Survey response data

5.4 Summary of Data Analysis Findings

In general, the program evaluation element based on the survey of grant recipients yielded the following general findings:

- While the electronic survey elicited some response from grant recipients, the follow-up efforts improved the survey response rate three-fold.
- North Carolina and Pennsylvania accounted for the highest survey response rates with 73 percent and 52.6 percent, respectively.
- The grant funding created or retained nearly 2,200 jobs over the study period, excluding the Enterprise Development Programs. Business/training jobs accounted for the largest share of the job creation and retention.
- Projects that responded to the survey leveraged an additional \$179.5 million in private investment over the predictions. The Southern Appalachian Fund Technical Assistance and Operational Assistance grants accounted for approximately \$100 million of this. Enterprise Development Programs leveraged \$39 million more in private investment than anticipated.
- According to the survey responses of grant recipients, job creation and retention projects as a whole were viewed as most successful at impacting economic measures, and least successful at impacting environmental measures.

¹⁹ Note that n=97 for all categories except “improved civic life and governance” where n=96.

6 Case Studies of Best Practices for Job Creation and Retention

The 15 case studies contained in this section:

1. Highlight a diverse group of inventive programs conducted over a range of funding cycles;
2. Document the strategies and approaches used to meet barriers or challenges;
3. Identify issues with outcome measures, techniques and means to track project achievements;
4. Describe the outcomes and impacts of the programs; and
5. Advise communities planning similar programs of lessons learned in the course of the administration of programs and the grant process.

The programs selected for in-depth case study were chosen based on notable approaches and results. The Project Team identified a group of approximately 30 non-infrastructure projects distributed among Appalachian Regional Commission (ARC) member states based on project descriptions, information in the ARC.net database and preliminary survey results. The programs balanced job creation and retention projects. The Project Team and ARC staff culled the preliminary list down to 15 projects for the case study analysis. Due to non-response, some of the initially selected projects were replaced with alternative project options, resulting in the final list presented in this chapter.

In addition to jobs, these examples generated income and other quantitative outcomes, accompanying qualitative impacts, and policy implications for Appalachian residents and businesses. They enhanced economic development by attracting new industry, encouraging business expansion, diversifying local economies, and generating permanent, private-sector jobs.

Case studies were representative of each of the project-type categories as identified in Chapter 5.1.1. Nine of the 15 case studies were Business/Training related projects and two were Energy/Environmental projects. The remaining categories, Local Food, Child Care/Education, Community Building/Tourism and Planning/Research accounted for one case study each.

All but three of the thirteen states in the Appalachian region are represented in the selected case studies. The initial list contained options from every state, but the final list was unable to maintain this representation. In total, five cases are for projects that were implemented in North Carolina, more than other states in the Appalachian Region; two are based in Virginia and one each in Alabama, Georgia, Kentucky, Maryland, New York, Ohio, Pennsylvania, and West Virginia. The states without case studies are Mississippi, South Carolina, and Tennessee. Three of the projects were considered "Commission" projects, with funding directly out of ARC funds rather than a state's allocation.

The 15 case studies include:

1. A **North Carolina** program funding diverse grassroots programs promoting Triple Bottom Line projects.
2. An **Alabama** program promoting export of state goods.
3. A **Georgia** program to restore a city's downtown to its historical original look.
4. A Commission-funded **Virginia** program to develop an alternative energy curriculum.
5. A **Maryland** program creating business opportunities around historic hiking and biking trails.
6. A **Virginia** program installing exhibits and media presentations promoting regional arts, culture and history.
7. A **North Carolina** program creating manufacturing jobs for individuals with disabilities.
8. An **Ohio** program promoting farmers' markets and local suppliers.
9. A **New York** program launching a reuse center.
10. A **Kentucky** program developing an energy boot camp.
11. A **Pennsylvania** program incubating small businesses, promoting international business development and procurement technical assistance.
12. A **North Carolina** program supporting the growth of clean energy economy.
13. A **West Virginia** program supporting an early-stage investment fund in high technology projects.
14. A Commission-funded **North Carolina** program improving curricula and training teachers in entrepreneurial education activities.
15. A Commission-funded **North Carolina** program promoting manufacturing and overseas sales of wood products and home furnishings.

Table 10 details the 15 case studies by grantee, project category, year of funding, funding level, and primary outcome.

Table 10: Case Study Overview²⁰

	Grantee	Project Title (Grant Number)	Project Description	Project Type	Year	ARC Funds	Total Funds	Primary Outcomes
6.1	The Conservation Fund	Capacity building for Asset-Based Economies in Western North Carolina (NC-16686-I)	To develop local Asset-Based projects through a series of training workshop and hands-on technical assistance.	Planning / Research	2010	\$100,000	\$229,700	17 jobs created
6.2	University of Alabama	University of AL Export Trade Financing Program (EXTRA) (AL-15573-C3)	Continuing support for a program that addresses access to technical assistance and finances in export marketing.	Business / Training	2010	\$151,125	\$302,250	92 jobs created; \$6.7 million LPI
6.3	City of Toccoa	Toccoa Downtown Revitalization Project (GA-15259-I)	Revitalize the historic downtown business district.	Community Building / Tourism	2005	\$300,000	\$1,400,000	1,100 jobs retained
6.4	Mountain Empire Community College	Mountain Empire Alternative Energy Initiative (CO-16396-I)	Develop a career Studies Certificate to articulate with an Energy Management Associate Degree program.	Child Care / Education	2009	\$40,000	\$82,386	
6.5	The Progress Fund	Great Allegheny Passage Economic Development Program (MD-16055-I)	To coordinate the Trail Town Program in the Maryland communities	Business / Training	2008	\$100,000	\$200,000	76 jobs created; 17 new businesses created
6.6	Round the Mountain Southwest VA Artisan Network	Heartwood: Southwest VA Artisan Gateway (VA-16005-I)	For state-of-the-art iconography interior exhibits, media presentations, furnishing and equipment at The Heartwood: Southwest Virginia's Artisan Gateway	Business / Training	2008	\$1,000,000	\$2,058,140	

²⁰ Note that the Mountain Empire Alternative Energy Initiative (6.4) did not directly have any reportable job or business creation impacts, though there have been 24 students enrolled in the program. Additionally, the Heartwood Southwest VA Artisan Gateway (6.6) does not have easily isolated impacts, and thus none have been noted in the table.



	Grantee	Project Title (Grant Number)	Project Description	Project Type	Year	ARC Funds	Total Funds	Primary Outcomes
6.7	Marketing Association for Rehabilitation Centers (MARC)	MARC Custom Medical Products (NC-15696-I)	A program to develop manufacturing capacity to produce custom medical drapes and other products and generate funds for development programs for people with disabilities	Business / Training	2007	\$200,000	\$883,400	162 jobs created; 150 jobs retained; \$2.7 million LPI
6.8	Ohio State University Research Foundation	Strengthening Appalachia's Farmers' Markets (OH-16104-I)	To provide low- and no-cost marketing and promotional strategies and templates for Appalachian Ohio farmers' markets.	Local Food	2008	\$75,000	\$150,157	75 jobs retained
6.9	Cornell Cooperative Extension of Tompkins	Finger Lakes Reuse Center Start-up (NY-16085-I)	To launch the Finger Lakes Reuse Center.	Business / Training	2008	\$148,463	\$300,444	9 jobs created
6.10	North Carolina REAL Enterprises, INC	Expanding Entrepreneurship in Appalachia – REAL Entrepreneurship Curriculum Improvement (NC-15807-I)	To revise the REAL Enterprise curriculum to include new technologies, more financial literacy, and information about emerging industry clusters and train new faculty.	Business / Training	2007	\$82,600	\$205,350	90 jobs created; 90 new businesses created
6.11	Northeastern Pennsylvania Alliance	Northeastern PA Alliance Enterprise Development (PA-8291-C29)	Project will continue small business financing, international business development assistance, procurement technical assistance, support of PA Source Net and other e-commerce activities.	Business / Training	2010	\$400,000	\$800,000	169 jobs created; 640 jobs retained
6.12	Land-of-Sky Regional Council	Building the Clean Energy Economy in Western North Carolina (NC-16543-I)	Activities to support the growth of a clean energy economy in Western North Carolina	Energy / Environmental	2010	\$100,000	\$200,000	9 jobs created; 173 new businesses created

	Grantee	Project Title (Grant Number)	Project Description	Project Type	Year	ARC Funds	Total Funds	Primary Outcomes
6.13	West Virginia High Technology Consortium Foundation	WV High Technology Consortium Foundation INNOVA Commercialization Technical Assistance (WV-15262-I)	Continuing support for an early-stage investment fund linked to a range of technical assistance efforts.	Business / Training	2005	\$125,000	\$250,000	22 jobs created
6.14	Kentucky Highlands Investment Corporation	Kentucky Highlands Energy Business Boot Camp (CO-15789-I)	To develop and Energy Business Boot Camp, providing intensive performance-based entrepreneurial training and mentoring to growing firms.	Energy / Environmental	2007	\$75,000	\$225,000	15 jobs created
6.15	North Carolina Department of Commerce	FY 2010-2011 Wood Products/Home Furnishings Initiative (CO-15268-I)	To assist companies in North Carolina and other states in the Appalachian Region export wood products, manufacturing supplies and home furnishing.	Business / Training	2010	\$25,000	\$75,000	Floor sales = \$200,000; Expected sales = \$8.5 million

Each case study below is organized and presented in the following standard format:

- Community Profile
- Project Description
- Project Planning and Implementation
- Economic and Community Impacts
- Lessons Learned
- Conclusions

The program descriptions are based on a range of information sources, including telephone and in-person interviews of program officials, follow-up calls, survey results, online reports and website content. Program documents were also utilized and included progress and final reports, as well as materials supplied by ARC, the grantees and other funding organizations. The sections on community profiles were sourced mostly from reports and tables compiled by ARC and available on their website, though some additional outside resources were consulted.

The case studies examine a range of issues including, but not limited to:

- How was the project conceived? What organizations were involved? What did it take to make the concept a reality?

- What was the rationale for the project? What specific community and economic factors was it designed to address?
- What barriers or challenges did the project face? How were they overcome? How did project managers conceive these strategies?
- What has been the project's impact in terms of direct jobs and income, spin-off activities, new relationships and capacity developed, and other community benefits?
- How is success being measured? What is the rationale for these metrics? How is the data collected?
- What were the key factors that made the project successful? Whose support was needed? What other public and private resources were required?
- What were the staffing issues, if any?
- What was learned from the project and what advice might be offered to organizations developing comparable projects?

A summary of Key Lessons Learned concludes the chapter. These conclusions are compiled and consolidated from lessons identified in the individual case studies.

6.1 Capacity Building for Asset-Based Economies in Western North Carolina: Resourceful Communities Program

The purpose of this project is to assist The Conservation Fund's Resourceful Communities Program (TCF/RCP) in supporting a network of grassroots organizations across North Carolina but primarily in economically distressed areas of the state. TCF/RCP provides re-granted funds to organizations for their projects by providing small grants, training and technical assistance. These funds come from the Appalachian Regional Commission as well as other private and public sources. In turn, these projects aspire to attract visitors, promote arts and culture, preserve the environment and improve energy efficiency. Target audiences include entrepreneurs, youth, residents and non-profit organizations.

ARC awarded a grant of \$100,000 to The Conservation Fund's Resourceful Communities Program in 2010 to support a network of grassroots organizations in economically stressed areas of North Carolina. Local funds brought total program support to \$229,700. This project is categorized as a Planning/Research project that focused on building community-level support for development and implementation of asset-based development strategies.

6.1.1 Community Profile

Twenty-nine counties in North Carolina are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi. The 29 counties within the region and in NC are: Alexander, Alleghany, Ashe, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Davie, Forsyth, Graham, Haywood, Henderson, Jackson, McDowell, Macon, Madison, Mitchell,

Polk, Rutherford, Stokes, Surry, Swain, Transylvania, Watauga, Wilkes, Yadkin, and Yancey.

The 2012 population of the Appalachian region of North Carolina was just over 1.7 million residents. Comparatively, per capita income in the region was only \$34,215, or about 78 percent of the U.S. value, 90 percent of North Carolina and 95 percent of all Appalachia. Per capita income in the Appalachian counties of North Carolina ranged from a low of 62 percent of the U.S. per capita average in Graham County (\$26,988) to 92 percent in Polk County (\$40,232).²¹

ARC defines the economic status of each county with one of five possible economic status designations based primarily on three indicators: three-year average unemployment rate, market income per capita, and poverty rate. The five status designations are: distressed, at-risk, transitional, competitive, or attainment. “Distressed” counties are the most economically depressed and “attainment” counties are the most prosperous. All but one of the Appalachian North Carolina counties was defined as at-risk or transitional; the exception being Graham County which received the lower distressed classification. In FY 2012, none of the counties in the North Carolina region of Appalachia received the higher economic status designation of competitive or attainment.²²

In 2012, when both the national and Appalachian Region’s unemployment rate was 8.1 percent, the counties of Appalachian North Carolina experienced a higher unemployment rate of 9.4 percent, about equal to the state rate. Unemployment rates in the Appalachian counties ranged from 7.3 percent in Henderson County to 16.8 percent in Graham County. Only three Appalachian North Carolina counties had lower unemployment rates than the national average.²³

The poverty rate in Appalachian North Carolina from 2008 to 2012 was 17.9 percent; 120.3 percent of the U.S. rate of 14.9 percent. The poverty rate for all of the Appalachian Region was 16.6 percent while that for North Carolina was 16.8 percent.²⁴

6.1.2 Project Description

The Conservation Fund’s Resourceful Communities Program (TCF/RCP) supports a network of 300 grassroots and community organizations in low-wealth communities that advocate the “triple bottom line” (TBL) where outcomes promote sustainable economic development, social justice, and environmental stewardship. It provides opportunities to preserve landscape, lift residents out of poverty, and celebrate the state’s unique culture. TCF/RCP helps partners meet challenges by building on local assets—people, heritage, land and water—to create sustainable communities. The concept of the TBL is the foundation of TCF/RCP’s work.²⁵

²¹ U.S. Department of Commerce Bureau of Economic Analysis; Local area Personal Income, 2012. Compiled by the Appalachian Regional Commission, March 2014.

²² County Economic Status Fiscal Year 2012, Appalachian Regional Commission.

²³ Unemployment Rates, 2012; Appalachian Regional Commission.

²⁴ Poverty Rates: 2008-2012; Appalachian Regional Commission.

²⁵ Resourceful Communities – Our Approach. <http://www.conservationfund.org/what-we-do/resourceful-communities/our-approach>

While the traditional strategy to build economic opportunity in these areas has been based on the extraction of natural resources, TCF/RCP recognized the strategy is not sustainable, nor were the impacts and benefits equitable. Instead, TCF/RCP helps communities:

- Capitalize sustainably on their significant natural resource base;
- Tap their cultural traditions of land and water stewardship and entrepreneurship; and
- Leverage environmental dollars, expertise and techniques to increase local wealth and improve the quality of life by “creating new economies” that protect, enhance and restore the natural resource base.

TCF/RCP helps these organizations carry on their work and ensure sustainable change through integrated solutions. All of the organizations in this asset-based development project were either working on a TBL project or working towards TBL projects. Initiatives included projects covering sustainable agriculture, alternative energy, youth development, eco/agricultural tourism, and others.

What makes the program unique is the breadth of support TCF/RCP provided for organizations applying for and administering projects that it funded. Funds have supported a wide range of projects, including eco-tourism, sustainable agriculture, youth leadership development, alternative energy, food distribution centers, green job training programs, paddle trails and more.²⁶ Another distinctive aspect of the program was the assistance provided to organizations seeking potential funding from other funding sources.

ARC funds were used by the grantee to develop local asset-based projects through a series of training workshops and hands-on technical assistance. Local projects then received implementation awards of up to \$15,000 from the Creating New Economies Fund, to implement those strategies that have clearly articulated social, economic, and environmental benefits.

Regional training workshops were held, along with a state-wide gathering of peer communities active in the asset-based development field. ARC support underwrote the costs of personnel, meetings, travel, overhead, and the Creating New Economies Fund.

6.1.3 Project Planning and Implementation

The adverse shift in the economic environment over the past ten years spurred the Conservation Fund's Resourceful Communities Program (TCF/RCP) to undertake the “Capacity Building for Asset-Based Economies in Western NC” project. The program proposed four major areas of work: conduct outreach to North Carolina ARC partner municipalities and community organizations to help them plan and develop asset-based development programs; award grants of up to \$15,000 for projects and programs that promote the “triple bottom line”; conduct regional leadership training workshops to increase community capacity for asset-based development efforts; and provide one-on-one assistance to individual groups to meet their needs. It also provided critical support to supplement local government services that had been cut back.

²⁶ <http://www.conservationfund.org/what-we-do/resourceful-communities/our-approach>

The Creating New Economies Fund (CNEF) grant program was created to help partners implement TBL projects, providing seed grants of up to \$15,000. Through ARC funding, TCF/RCP funded 12 projects totaling \$85,000 from both 2011 and 2012 CNEF grant cycles. The funds were also designed to build organizations' long-term capacities to access grant funding. Seven additional projects were funded through \$49,000 in leveraged funds.

Many grassroots organizations are rurally isolated, lack resources and have little or no staff. These workshops allowed for cross pollination of ideas and networking of people across race, age, economic status and geography.

Through nurturing networks, organizations could benefit from the past success experiences of previous participants. Although TCF/RCP recognized these potential projects as unique, it maintained they could benefit from others' proficiencies - through "convenings" (i.e., an annual gathering where grassroots partners can network, learn skills, discuss issues and connect with resources), peer learning, and site visits.

Projects included a green jobs training program, heritage tourism site development, training to participate in ecological restoration work, native plant propagation and business planning support.

Workshop topics ranged from technical assistance in general proposal writing skills to budgeting, economic development, setting objectives and goals, developing logic models, program evaluation, and others. Support requested from organizations included fundraising, board recruitment and leadership succession. Workshops were provided free of charge and lasted one day. Travel expenses (including meals and mileage) were available in some cases, as was lodging for select participants based on arduous travel times. Workshops ranged from individualized one-on-one assistance to small- and medium-sized workshops.

To obtain support, organizations completed a pre-screening procedure to determine if potential projects met TCF/RCP's TBL criteria. The pre-screening application included information about the organization, the project idea, and how it promoted the TBL. Successful programs were then required to submit full proposals including information on stakeholder involvement, an evaluation plan, a detailed budget and how the project advanced the mission of the organization. TCF/RCP provided assistance throughout the process, including site-visits if requested by the organization or if suggested by TCF/RCP. Post grant award, TCF/RCP assisted organizations in securing additional funding, and in areas such as board and organizational development and strategic planning.

6.1.4 Economic and Community Impacts

Without ARC funding, this project would not have been undertaken. Essentially, the grantee attributes the outcomes of the program to ARC support and funding. Outcome measures were collected directly from the sponsored organizations.

Of 36 participants attending the 2011 technical assistance session, 23 submitted pre-proposals from Appalachian North Carolina requesting combined funding of \$212,898. The 17 applicants invited to submit full proposals received feedback on their pre-proposals and were encouraged to seek additional support and feedback from staff as

they developed their full proposals. In 2012, 16 pre-proposals were submitted from western North Carolina applicants requesting a total of \$172,800 in funding. This re-granting program helped attract additional government and/or philanthropic funding.

Utilizing ARC funds, TCF/RCP awarded 12 grants for a total of \$85,000 in 2011 and 2012 that leveraged \$820,524, and engaged over 2,000 people in their work. Seven additional programs were funded with \$49,000 in leveraged funds during the 2011 and 2012 grant cycles.

Additional economic outcomes included the creation of 52 part-time (8 permanent, 44 temporary); and 17 full-time (1 permanent, 16 temporary) positions. Agricultural industries created or retained 36 part-time jobs (4 permanent, 32 seasonal) while 11 part-time positions (6 permanent, 5 temporary) were created or retained in the services field.

As a result of this project, one business was retained and one improved. Ninety organizations located in 14 communities saw improvement, including new sources of income or increasing income for local residents, along with increased value of community assets. The grantee attributed these gains to the project. Programs improved the skill level of the workforce, access to local markets for products, businesses, artisans and entrepreneurs, and they supported cultural, historic sites and other amenities.

The project provided capacity building support to nonprofit organizations, via workshop trainings and direct technical assistance, at three workshops. There were a total of 93 participants in these trainings. One-on-one technical assistance was provided to ten organizations. As a result, these organizations now have more engaged boards, new revenue streams, more strategic programming and are better equipped to face organizational challenges.

The project had a moderate economic impact in increasing local business sales or value of business assets, and increasing the value of household assets for local residents. Local business viability was modestly influenced, along with improved stability and sustainability of the local economy. Project impacts improved quality and/or access to land or natural resources, waste management, energy security and independence and energy efficiency or conservation. Quality of life issues, such as civic life, governance and recreational activities, along with the population's knowledge and educational levels, were positively altered.

6.1.5 Lessons Learned

The lessons learned drawn from this program are drawn from interviews of program administrators, the results of a post-project evaluation survey conducted by an ARC contractor of the Non-Infrastructure grant recipients during the 2004-2010 grant period, and the Final Performance Narrative report completed by the grantee.²⁷

- **Need for increased coordination and “peer learning.”** Many of the grassroots organizations TCF/RCP works with offer some truly innovative strategies but start from scratch when initiating projects. This is despite the reality that these organizations tend to face similar organizational challenges,

²⁷ Final Project Performance Narrative Project Activities and Accomplishments; April 1, 2010 – March 31, 2012. The Conservation Fund's Resourceful Communities Program; ARC Final Report.

such as the need for diversified funding streams, weak board participation, and lack of leadership transition. Although TCF/RCP offers opportunities for organizations to learn together and from each other, more opportunities for “cross pollination” and learning would more efficiently address organizational challenges, disseminate lessons learned and share opportunities seized.

- **Workshops can inform organizations about available resources for organizational development, project planning and other topics.** Small grassroots organizations often lack the staffing or resources to pursue outside funding and have limited knowledge of federal, state or local sources that can be of assistance. Pooled information and shared lessons learned can assist these organizations, particularly those that face rural isolation and/or are located in economically stressed areas.
- **Recognize programs that do not address traditional issues.** Grassroots organizations that are not issue-based may struggle to secure funding for projects. TCF/RCP has found that many grassroots organizations are expanding into new program areas they have not previously undertaken – namely health, food access and sustainable agriculture work to address significant community need not being met by local agencies. Additional programming and funding support for unique opportunities that fall outside conventional issues or for non-traditional partners is needed to shore up current limited availability.
- **Demand for TCF/RCP programs and small grants has grown dramatically.** Participation continues in regional leadership workshops and “Grass Roots Convenings.” These programs are increasing each year as do applications and requests for CNEF grants. TCF/RCP’s response has been to continue to offer their services at no-cost to participants and seek additional and diversified funding for its work.
- **A triple bottom line approach creates more innovative projects with broader impacts.** TCF/RCP uses the triple bottom line of sustainable economic development, environmental stewardship, and social justice as the basis for all its work, including the small grants program. The triple bottom line projects are innovative and far-reaching, while also addressing critical issues and needs in partner communities. Economic opportunities are provided, while the region’s critical resources are protected and the benefits extend to the most under-served communities. Rather than addressing a single community need, the triple bottom line approach provides a foundation to more systematically address inter-related challenges.

6.1.6 Conclusion

The four major goals of the program were:

1. Conduct outreach to NC ARC partner communities to help them plan and develop asset-based development projects.

2. Award grants of up to \$15,000 for projects and programs that promote the “triple bottom line” of sustainable economic development, environmental stewardship and social justice through the CNEF program.
3. Conduct regional leadership training programs.
4. Provide one-on-one technical assistance to individual groups, tailored to their unique needs.

Overall, TCF/RCP achieved its projected goals. Though only one of two planned CNEF workshops was held in 2010, the project largely succeeded by training 35 participants at the grant writing workshop and an additional 30 community leaders participated in a targeted grant writing session for western small town members. The TCF/RCP also offered three regional leadership workshops in Western North Carolina for a total of 93 participants during the project period. Additionally, ten partner organizations were provided one-on-one technical assistance. This assistance is ongoing and consists of mentoring and training.

Grant awards funded 19 projects for a total of \$136,000 during two grant cycles.²⁸ Of those, \$85,000 in ARC funds enabled 12 grants for projects that leveraged \$820,524 and engaged over 2,000 individuals.

TCF/RCP extends sincere appreciation for ARC's on-going support. ARC's investment has helped create substantive change in Western North Carolina by supporting local, asset-based economic development efforts in the region.

6.2 University of Alabama Export Trade Financing Program

The purpose of this Business/Training project was to deliver export technical assistance to small companies within Appalachian Alabama. The Export Trade Financing Programs (EXTRA) assisted small manufacturers in Appalachian counties in increasing international sales, and trained local bankers interested in providing trade financial services to small businesses within their markets.

ARC awarded a grant of \$151,125 to the University of Alabama in 2010 to provide in-depth technical and short-term assistance in export financing services to small businesses and to train and educate local bankers to provide trade finance services to their customers. Local funding brought the total program support to \$302,250.

6.2.1 Community Profile

Thirty-seven counties in Alabama are part of the Appalachian Region. The counties in Appalachian Alabama are: Bibb, Blount, Calhoun, Chambers, Cherokee, Chilton, Clay, Cleburne, Colbert, Coosa, Cullman, De Kalb, Elmore, Etowah, Fayette, Franklin, Hale, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Limestone, Macon, Madison, Marion, Marshall, Morgan, Pickens, Randolph, St. Clair, Shelby, Talladega, Tallapoosa, Tuscaloosa, Walker, and Winston.

²⁸ Ibid. p.16.

The 2012 population of Appalachian Alabama was about 3.1 million residents. The per capita income for the region was only \$37,046, or about 85 percent of national per capita income. However, it slightly exceeded, by three percent, the per capita income of the state of Alabama and all of Appalachia. Per capita income by Appalachian Alabama counties ranged from 57 percent of U.S. average (in Bibb County and Coosa County) to 105 percent in Shelby County (not included in this project) and 102 percent in Jefferson County.²⁹

ARC defines the economic status of each county with one of five possible economic status designations based primarily on three indicators: three-year average unemployment rate, per capita market income, and the poverty rate. The five status designations are distressed, at-risk, transitional, competitive or attainment. “Distressed” counties are the most economically depressed and “attainment” counties are the most prosperous. In FY 2012, all but two of the counties in Appalachian Alabama were designated as distressed, at-risk, or transitional. One was deemed competitive and one attainment.³⁰

6.2.2 Project Description

The purpose of the project was to provide in-depth and short-term targeted, one-on-one technical assistance in export financing small businesses in Appalachian Alabama, and education and training for local banks to learn how to serve local firms with export financing programs. Expertise was provided by the University of Alabama’s Alabama International Trade Center (AITC). Targeted businesses were new-to-market exporters, potential exporters who might have been approached by an overseas client interested in purchasing U.S.-made products, or existing exporters. The targeted support occurred from 2008 to 2011 with the goal of increasing international sales and sustaining export growth.

ARC funding paid for personnel costs, in-state travel, and general operating expenses such as supplies, subscription services to overseas media and technical publications, and a 15 percent indirect rate. Approximately one-half of ARC’s award went towards personnel, including independent contractors with highly specialized skills in credit analysis of foreign companies, government lending programs, and loan development.

6.2.3 Project Planning and Implementation

The impetus for this project was a gap in export finance services for small business exporters in Appalachian Alabama brought on by the 2007 to 2009 financial crisis, as large commercial banks curtailed commercial lending, consolidated operations and/or relocated out-of-state. As a result, banking expertise in the international trade division of local commercial banks became scarce or nonexistent at a time when more small businesses were getting involved or growing their export transactions.

²⁹ U.S. Department of Commerce Bureau of Economic Analysis; Local Area Personal Income, 2012. Compiled by the Appalachian Regional Commission, March 2014.

³⁰ County Economic Status Fiscal Year 2012. Appalachian Regional Commission.

Alabama exports were \$15.5 billion in 2010, up 25 percent from \$12.3 billion in 2009, and up 112 percent over 2000 export figures.³¹ Demand was growing for international banking services – wire transfers, foreign exchange, letters of credit and export financing. The state trade office, the Alabama Development Office, initiated an aggressive trade promotion strategy to increase exports for small businesses, sparking growing interest from small firms.

Before the banking crisis, according to an AITC official, more than 150 banks near Birmingham, the state's primary manufacturing center, provided know-how in international trade. Currently, only one regional bank has international banking staff and operations. Large commercial banks did not service the smaller transactions of the small business customers, leaving them without access to banks willing to extend credit on export transactions. Small local banks were not familiar with export loan guarantee programs. The need for local access to "hands on" technical financing assistance for small export businesses was evident, to boost export sales and provide entry to export financing services. Project sponsors identified a requirement for education and training of local community bankers.

The project goal was for AITC to identify 25 Alabama companies in the targeted Appalachian counties requiring assistance in basic export finance. In addition, training would be provided to 10 local and community banks and 50 local bankers who were interested in providing trade finance services to local small businesses.

AITC would assist local and community banks during the complete project period, consisting of 12 months. Months 1-6 of the project period would identify participants with export growth potential. During months 3-12 of the project period, in-depth assistance would be provided to 25 exporters.

Company candidates were identified from export assessments, site visits and referrals from AITC's partner network, especially the state trade office. Other sources of identification included local chambers of commerce, logistics providers and banks. Manufacturers learned of AITC services through outreach events hosted by alliance organizations, while state-sponsored trade missions provided additional candidate companies. The project team networked with the private sector, exporting companies, and economic development organizations to generate potential referrals. Following the project team's on-site interviews or export assessments for each potential candidate company, the number of companies was narrowed and 25 selected for in-depth assistance.

AITC provided services to 25 to 30 companies in a given year. Companies typically received between five and 100 hours of one-on-one assistance. No parameters for amount of service, in terms of hours or dollars expended per company, were developed in advance. Over the course of a year, on average, each company used about \$5,000 - \$8,000 of program funds. Some remained with AITC over time; others received short-term services. In some cases, those already involved in exporting had a particular difficulty with a transaction and AITC provided very short-term service to move that transaction forward. Another company might be looking to enter a new market or be

³¹ Export Trade (EXTRA) Financing Program (Continuation). Alabama International Trade Center, Project Summary. The University of Alabama, 2013.

approached by a new partner company where more involved service over time was required. A third company may simply require intelligence about a particular market.

AITC trade counselors, both full- and part-time, provided the expertise; when available, export sales and logistics experts were recruited from the trade side of local banks. Others had remained in-state when their banks relocated to larger out-of-state cities such as Atlanta, Miami or Charlotte.

The program taught the basic day-to-day activities necessary to carry on international business, "Exporting 101," along with finance-specific content. Basic topics included: getting companies to pay for your goods and services; lines of credit; how to access Small Business Administration (SBA) loan guarantees for exporters; what services were available from banks; how SBA loans worked; what payment terms they could offer; how to perform due diligence on foreign companies or the host country; and the programs available through the Export-Import Bank of the United States. Firms were also interested in information about new markets or how to evaluate a new foreign company's credit worthiness. While relevant to current deals, the information also served as a framework for future business.

Beyond the basics, international finance-specific content was provided, consisting of:

- Training on export financing tools including risk factors, loan programs, credit insurance, and other transactional issues
- Meeting facilitation between the client and financial institutions
- Collection and review of financial statements on Alabama exporters and foreign buyers
- Assessment of country risk and country limitation factors
- Assessment of foreign buyer risk, financial statements, and provision of credit analysis
- Recommendations of specific export financing programs and services
- Assistance in the preparation of financing proposals and bank participation
- Hands-on assistance to secure financing

The most sought-after information focused on trade with Canada, Mexico or NAFTA trading partners. Additional requests centered on trade potential with China or the United Kingdom. However, some companies ventured into agreements with other so-called "risky" countries such as Argentina.

AITC addressed the lenders' requirements on two levels. Staff met with bankers and provided individual technical assistance in one-on-one sessions, and AITC offered training programs for bank staff. For example, staff from AITC might meet with loan officers from a community bank and describe the resources available to assist exporters and clarify how credit could be extended (backed by government loan guarantees). AITC also worked with trade associations in the banking sector to develop continuing education sessions for bank personnel. It assisted in the design of curriculum targeted at lenders attending bankers' conventions and presented sessions on the exporting needs of customers.

6.2.4 Economic and Community Impacts

Outcomes were collected annually by AITC via direct interviews of their customers; information provided by project partners including the state trade office; and reviews of secondary data sources regarding export sales and existing industry development. Program outcomes were acknowledged as primarily the product of ARC's intervention and funding. Had ARC not provided funding, program administrators believe the results would have been significantly scaled back.

In 2007, international trade in Alabama was a \$32.8 billion industry with approximately 2,300 firms actively engaged in trade and 80 percent represented as small business. Companies located in-state sold more than \$14.4 billion overseas.³²

There were 97 businesses improved during the course of the project. In the manufacturing sector, 234 jobs were created. Leveraged private investment totaled \$18.6 million and export revenues increased \$27.7 million. The program provided training for 107 individuals from lending institutions in Appalachian Alabama.

Access to markets for local products, businesses, and entrepreneurs was improved as a direct result of the program. In addition, new jobs or increased employment in existing businesses rose and new sources or increased income of local residents resulted. To a lesser degree, the program improved the stability and sustainability of the local economy and increased the viability of local businesses. Additional funding was acquired from ARC's global initiative and the SBA STEP program as a result of the program and collaboration with the State Trade Office.

The program assisted manufacturing companies from diverse sectors, all located in Appalachian counties. Sectors and industries included agriculture, forestry, lumber mills, food processing, commodities and farming, industrial and/or packaging equipment, snack and pet foods, plastic components and industrial compressors. The businesses were located primarily in the five counties surrounding Birmingham, where approximately 60 to 70 percent of the state's manufacturing originates. Others were from the northwest section of the state near Mississippi, northeast towards Georgia or neighboring the Tennessee border.

6.2.5 Lessons Learned

The lessons learned from this program are drawn from interviews of program administrators and a post-project survey conducted by an ARC contractor.

- **There is value in providing one-on-one, in-depth export finance assistance to manufacturers in the Appalachian Region.** Various types of export assistance are available from several sources; federal, state and local. There is benefit within this mix for local in-depth, one-on-one export finance programs that target fewer companies with detailed assistance, rather than targeting many firms concurrently.
- **A variety of events can motivate companies to enter the export business and follow-up assistance is advised.** Overseas trade missions, domestic trade shows and regional workshops can increase businesses'

³² Brian Davis. A world of opportunities for Alabama business and banking industry, Alabama Banker, Summer 2008.

awareness of opportunities in the export market. By attending, businesses can meet potential customers, learn the overseas market, and gauge demand for their products and services. However, these meetings can also generate additional questions. A system should be in place to field subsequent general and financial questions generated by these encounters.

- **Increasing bank engagement in exporting is challenging.** The project hoped to have a greater impact in fostering community bank engagement in the export finance arena; however this outcome did not develop as anticipated. The economic problems affecting the nation and the banking industry during the grant period discouraged banks, at the time under stress, from looking beyond their local customer bases, according to program administrators. Nevertheless, they note, the project did increase awareness of community banks of the issues involved in international trade such as relevant populations, markets, economies and the importance of exporting in the global world economy.
- **With assistance, small companies can get involved in exporting.** The export market is not the exclusive purview of large companies. While resources and time are required for market entry, companies of any size can engage in international trade with some assistance. The costs of entrance are lower than ever. A modest level of exporting can become successful to where it becomes a routine and growing component of a company's business model.
- **Companies need realistic expectations and appreciate scale.** Business executives sometimes underestimate the resources and time required to develop an exporting business. For most businesses, a multi-year commitment is required, often longer than anticipated initially. Relationships in the exporting arena take time to develop – the gestation period needs to be realistic.

Companies often fail to concede the time it took to reach their current size in the domestic market, which may be relatively modest, involving only a small number of states. Experts suggest that to develop a viable export capacity, a commitment of at least one dedicated full-time staff person is required.

Initially, businesses can be unaware of the size of the international market they contemplate entering. Take, for example, a company looking to export to Mexico. Mexico City alone is a city of more than 19.4 million people; roughly 75 percent of the population of the entire Appalachian region. A business is unlikely to set up an ongoing export business serving a market of this size without a substantial investment in staff, time and other resources. Expert assistance can illuminate these important parameters and help in the planning of the export business.

- **Exporting assistance can lead to success.** Some of the Alabama companies that received AITC assistance initially are currently among the state's largest exporters.

6.2.6 Conclusion

The University of Alabama Export Trade Financing Program successfully increased awareness of and involvement in export trade among many businesses located in Appalachian Alabama and the rest of the state. With expertise provided by the University's Alabama International Trade Center, the Center filled a void created by the country's economic crisis when larger banks reduced their support for overseas activities at a time when these support services were needed to grow markets and sales in a stagnating economy. The Center encouraged and assisted local community banks by furnishing international business expertise and aggressive trade promotion strategies to boost export sales and encourage entry of small businesses in the region.

International trade represents new markets for many small businesses. The grant provided service in basic export finance to 25 to 30 small businesses, approximately 20 local and community banks and 50 local bankers each year. With support from those experienced in this area, these small businesses learned about the market and expanded their opportunities.

Almost 100 businesses were improved during the course of the project and 234 jobs created. More than 100 bank personnel from banks located in Appalachian Alabama were trained as a result of this program.

6.3 Toccoa Downtown Revitalization Project

The primary goal of this Community Building/Tourism project was to revitalize the downtown historic business district of Toccoa, Georgia, by removing a colonnade of corroded concrete canopies supported by concrete columns. In 2005, ARC awarded a \$300,000 grant supporting this revitalization project. An additional \$1.1 million in state and local funding was obtained to supplement ARC funds.

6.3.1 Community Profile

Toccoa, Georgia, is a community of 8,400 residents in Stephens County, located in the Northeast section of the state about seven miles from the border of Georgia and South Carolina, about 90 miles northeast of Atlanta.

Manufacturing is the largest industry sector in the City, representing 32 percent of businesses. In June 2014, the unemployment rate was 7.2 percent compared to 7.8 percent in the state. The 2012 per capita income of \$18,329 in Toccoa was 27.6 percent less than the average for Georgia (\$25,309) and 34.7 percent below the national average of \$28,051. The poverty level in Toccoa, 27.8 percent of the population, was much greater than that in the rest of Georgia or the nation, 17.4 percent and 14.9 percent, respectively.³³

In 2012, per capita income in Stephens County, Georgia was \$32,056, or 73.3 percent of the per capita income for the entire U.S. The county per capita income also fell below the

³³ City-data.com and City-data.com: Poverty Rate Data.

rate for the combined Appalachian Region, the State of Georgia and the combined counties in all of Appalachian Georgia.³⁴

6.3.2 Project Description

The Toccoa Downtown Revitalization Project was designed to revive the downtown business district of Toccoa, Georgia, by restoring the town to its original historic look. In the 1970s, Toccoa undertook \$2 million of construction in the downtown area, transforming it into an outdoor-style mall, which was stylish at the time. The project featured the construction of cement canopies covering the storefronts and sidewalks. These features deteriorated over time and became dated. The 2004 undertaking involved removal of the canopies to increase the appeal of the historic downtown and boost business, tourism, and a sense of community pride.

6.3.3 Project Planning and Implementation

Planning for the project originally began in 1991 but lacked the political and financial support to begin construction until 2004. The canopies that had been erected in the 1970s had cost approximately \$2 million to construct, and the people of Toccoa were initially unwilling to support their removal. Over time, however, the condition of the canopies declined dramatically. The canopies were cracked and leaking, covered the storefronts making it difficult to tell whether businesses were open or closed, blocked light from entering businesses, and lacked character and charm to attract tourists and visitors. The closing of a major department store contributed to an even sharper decline in visitors and shoppers in the area, and left the downtown seeming even more run-down and abandoned. Population and business were both in decline.

The original storefronts remained underneath the cement canopies and aluminum plates that were installed in the 1970's. Planners and supporters of the Toccoa Revitalization Project believed that restoring the buildings to their original historic appearance could increase the appeal of downtown Toccoa, which would in turn increase traffic to businesses, property values, out of town visitors to the area, and jobs. The concept of historical preservation, however, was not popular amongst community members due to a lack of education and information available on the subject.

Through the use of town hall meetings, public hearings, mailed pamphlets, newsletters, and presentations on the proposed plans, support grew in the community. The residents of Toccoa were shown mock-ups of how the buildings would look with their original storefronts restored, and they were educated on the benefits of having a historically preserved downtown area. They were allowed input in aspects of the planning, such as whether the street would be one way or bi-directional, and what kind of parking would be available. The education of the importance of historical preservation and the community involvement efforts led to strong support for the revitalization of the downtown.

Once the project had community support, a cost estimate was put together by a professional engineering and architectural company in 2004. Project organizers went in person to apply for an ARC grant at the local ARC Georgia branch. ARC was the first to provide financial backing for the revitalization project, which gave the project a kick-start

³⁴ Personal Income Rates, 2012. Appalachian Regional Commission.

and provided it with the credibility it needed to obtain additional funding. The project received the remainder of the funding through other agencies: \$500,000 through the Department of Housing and Urban Development's Community Development Block Grant Program; \$75,000 through the U.S. Department of Agriculture's Rural Business Enterprise Grants Program; \$340,000 through the State of Georgia's Equity Fund; \$300,000 from the Georgia Department of Transportation; and \$50,000 through the Georgia Department of Community Affairs' Signature Community Program. The balance of \$705,000 was provided by the City of Toccoa. The actual cost of the project was approximately \$2 million, on par with the original estimated cost.

Figure 24: Rennovation of Toccoa, Georgia



Source: Used with permission of Main Street Toccoa

6.3.4 Economic and Community Impacts

This project has succeeded in revitalizing and restoring downtown Toccoa. The canopies were removed and 65 storefronts are now restored to their historic appearance. Each property owner was provided with individual consultation and the drawings for the renovations were approved by the Historical Preservation Commission. In 2011, Toccoa was added to the National Park Service's National Register of Historic Places, providing formal recognition of the area's architectural and historical significance and worthiness of preservation. The Georgia Department of Natural Resources has also registered Toccoa as a historic district, and Toccoa was a top ten semifinalist in the National Trust for Historic Preservation's 2008 Great American Main Street competition.

In 2008, there were 15 full time jobs, 29 part time jobs and 11 businesses created. There were also 55 full time jobs, 35 part time jobs and 30 businesses retained. As of 2013, there have been 1,100 jobs retained cumulatively. These are distributed among retail, finance and service sectors. Additionally, a total of \$27 million private investment has occurred in the downtown district. Property values and population in downtown Toccoa have increased, with median house value increasing by 24.16 percent since 2000.³⁵ From 2000 to 2010, the population declined by 8.4 percent to approximately 8,250.³⁶ There is also training and technical assistance provided to tourism-based entrepreneurs and businesses.

³⁵ <http://www.usa.com/toccoa-ga-housing.htm#House-Value>

³⁶ <http://censusviewer.com/city/GA/Toccoa>

Figure 25: Toccoa, Georgia – Before and After Renovation



Source: Used with permission of Main Street Toccoa.

The restoration has also returned Toccoa to its historic street grid to improve auto and pedestrian accessibility. Widened sidewalks, added bike lanes, and a new walking trail through the downtown have increased pedestrian safety. The street grid has improved traffic flow and made businesses more accessible by automobile. There is also improved energy-efficiency through new streetscape lighting. To further assist in revitalizing this rural community, an Urban Redevelopment Plan was adopted in 2011. Its mission is to revitalize the U.S. Highway 123 gateway corridor, attract businesses to downtown, and redevelop grey fields and brown fields near the city center.

Figure 26: Currahee Military Museum in Toccoa, Georgia



Source: Used with permission of Main Street Toccoa.

Since the project's completion, there has been a dramatic increase in visitors and investments because of the downtown's historic feel.³⁷ The City is currently working toward establishing an arts and entertainment district to enhance and promote vibrancy, and the old movie theater has been renovated to its historic appearance. There have been additions to the Currahee Military Museum since the project, as well as improvements to the golf course and the addition of a community swimming pool. There is now a mindset that historic preservation is important, with more residents taking care to preserve their homes during renovations and household improvements. The new Toccoa downtown has brought a sense of pride to Toccoa, and sparked an interest in the revitalization of the community.

³⁷ Joint Development Authority of Franklin, Hart and Stephens Counties – concrete canopies. One Georgia Authority. January 26, 2009. <http://www.onegeorgia.org/projects/9/Joint-Development-Authority-of-Franklin-Hart-and-Stephens-Counties--concrete-canopies>

6.3.5 Lessons Learned

The lessons learned from this program were drawn from interviews of program administrators, a post-project survey conducted by an ARC contractor and online resources.

- **Keep community members informed and involved to gain and maintain support.** Project leaders used varied techniques to engage community members throughout the project. The use of town hall meetings, public hearings, mailed pamphlets, newsletters, and presentations raised awareness about the plans and enlisted the support of community members. Support was maintained throughout the process by involving the community in decisions and important moments throughout construction. The community was allowed to vote on certain aspects of the project, such as parking, and held a groundbreaking ceremony when the canopies were taken down. Initial and maintained support from the community allowed the project to receive funding and resulted in a highly receptive and proud community once the project was completed.
- **Develop relationships with locally invested grant administrators and leaders.** The original project planners enlisted the assistance of a local grant administrator and leaders who were personally invested in the local community. By seeking financial assistance through the local ARC branch, the project leaders were able to build a strong relationship with a grant administrator who was dedicated to the local community and the project. They also hired a Main Street Manager who was extremely familiar and committed to Toccoa's growth and success. These strong relationships ensured dedication and passion for the project.
- **Use education as a means to inspire change/appeal to the history of the community.** Project leaders used education in order to raise support for the project which resulted in changing the mindset of the community. By raising awareness about the importance of historical preservation and restoration, and by showing Toccoa residents the history that existed in their town, leaders successfully illustrated to community members the benefits of embracing their history. This resulted in much more than just support for the project: residents have continued to embrace Toccoa's history in construction of multiple community buildings; raised awareness in home improvement projects; and generated a renewed interest in the history of Toccoa.
- **Support existing business during construction.** While the new downtown was under construction, project managers did their best to ensure that existing businesses could remain open and were not negatively impacted because of the work. They organized to have construction done at night, built pedestrian bridges to make sure businesses remained accessible, communicated to Toccoa residents that existing businesses would remain open throughout construction, and worked closely with these businesses to make sure all of their needs were met. This allowed for a smooth transition from the old to the new downtown Toccoa without neglecting existing business.

- **Change takes time.** While the project was initially conceived in the early 1990's, construction did not begin until 2004. Project leaders worked tirelessly to gain the community and financial support necessary to launch construction, and did not give up when things were not moving as quickly as they hoped. With the perseverance, determination, and dedication of leaders over the years, the project was eventually completed successfully.

6.3.6 Conclusion

The Toccoa Downtown Revitalization Project fulfilled and exceeded its goals and expectations. Through communication with the community, support of businesses, strong relationships, and perseverance over time, the project was extremely successful in transforming downtown Toccoa, increasing business, and inspiring future improvements.

6.4 Mountain Empire Alternative Energy Initiative

The Mountain Empire Alternative Energy Initiative at Mountain Empire Community College used ARC funds to develop a curriculum in alternative energy and purchase instructional equipment to support the program. Students learned the latest technologies in alternative energy, preparing them to meet the needs of the emerging regional alternative energy sector. Seven new Energy Technology courses were created, eventually resulting in development of one Certificate program and one Associate Degree program.

ARC awarded a grant of \$40,000 to Mountain Empire Community College for this Child Care/Education project in 2009. This grant was combined with local contributions of \$42,386 for total funding to \$82,386.

6.4.1 Community Profile

Mountain Empire Community College (MECC) is located in Big Stone Gap, a town of about 5,500 individuals in Wise County, in the mountains of Southwest Virginia. MECC is a comprehensive two-year college serving residents of Lee, Scott, Wise, and Dickenson counties, and the City of Norton.

Twenty five counties in the Commonwealth of Virginia are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi. The four counties served by MECC are all located in the Appalachian Region.

The 2012 population of Appalachian Virginia was about 765,500 residents. The per capita income of the region was only \$32,701 or about 75 percent of national, 68 percent of state and 91 percent of all of Appalachia in per capita income. Per capita income by county ranged from 59.7 percent of U.S. average in Grayson County to 103.6 percent in Botetourt County. Three of the four counties served by the college realized per capita income of only two-thirds the U.S. average. The residents of Wise County, where MECC is located, realized a somewhat higher per capita income at close to three-quarters the U.S. average. Income data for City of Norton residents are included in the Wise County statistics.

ARC defines the economic status of each county with one of five possible economic designations based primarily on three indicators: three year average unemployment rate, market income per capita, and poverty rate. The statuses are distressed, at-risk, transitional, competitive or attainment. Distressed counties are the most economically endangered and attainment counties are the most prosperous. Of 25 counties (and cities) in Appalachian Virginia, only Bath County received a rating of competitive and Botetourt County received a rating of attainment, reflecting relatively positive economic statuses. While no county received the most severe rating of distressed, the other counties all received ratings of at-risk or transitional.³⁸ The four counties served by MECC were each designated at-risk.

In Appalachian Virginia, about 8 in 10 individuals 25 years or older have completed at least a high school education – a rate that falls below the average for the entire U.S.³⁹

6.4.2 Project Description

In 2009, ARC funded the Alternative Energy Initiative at Mountain Empire Community College in Big Stone Gap, Virginia. The purpose was to develop an alternative energy Career Studies Certificate to increase the capacity of the southwest Virginia workforce to meet the needs of this emerging regional alternative energy sector. The Certificate would articulate with an Energy Management Associate Degree program offered at MECC. The project also included the purchase and installation of small-scale alternative energy demonstration equipment, including a wind turbine, on campus. ARC funds supported equipment and operational costs.

The program curricula included the latest advances in alternative energy technology: geothermal heat pump skills; the latest building performance evaluation techniques; photovoltaic (PV) installation of solar inverters and converters; and solar thermal technologies.

6.4.3 Project Planning and Implementation

In the wake of the economic crisis, which severely impacted Appalachian Virginia and the coal mining industry in particular, federal funds became available to support alternative energy programs. Since MECC already offered related training programs, this was an opportunity for the program to evolve in a direction compatible with its mission and fulfill one of its objectives: to demonstrate continuous improvement by embedding these latest technologies in degree programs in Heat Ventilation and Air Conditioning (HVAC) and Electrical. The timing of the grant, as alternative energy became a funding priority, coupled with distress in the local energy industry, made the program viable. MECC administration was confident the proposed addition could meet a key state criterion: in order to get a program approved by the Virginia Community College System (VCCS), the college had to demonstrate that graduates could find gainful employment in an existing industry in their geographic area.

Resistance to the project came from local mineworkers who viewed this emerging field of “alternative energy” as a threat to their livelihoods. From 2006 to 2013, the number of

³⁸ County Economic Status Fiscal Year 2012, Appalachian Regional Commission.

³⁹ Education – High School and College Completion Rates, 2008-2012, Appalachian Regional Commission.

coal miners employed in Virginia declined by 14 percent, from 5,262 to 4,521. The large energy producing companies in the region offered no opposition – supporting technologies that would, increase the sustainability of their businesses in the long run. Thus, by replacing the unpopular terminology of “alternative energy” with less threatening language, for example “energy technology,” opposition by the coal miners to the program was mitigated.

Three comparable programs at educational establishments in the Commonwealth of Virginia had become inactive. By reviewing those programs, learning from their challenges and not repeating their missteps, MECC was able to sustain its program. This proposed curriculum was based on model curricula, the subject matter expertise of core project partners and instructional resources disseminated by the Advanced Technology Environmental and Energy Center, a center of excellence located in Iowa.⁴⁰

MECC faced significant delays obtaining VCCS approval for the Energy Technology Associate Degree because the technologies were considered to be part of a new/emerging field. As a result, implementation of the degree program began later than anticipated, delaying graduate output.

MECC was unable to spend the entirety of ARC funds in the time allotted. The grant was targeted for professional development and construction of the wind turbine, but the grant expired before the windmill could be constructed. Thus, only \$27,000 of the initial \$40,000 was spent. ARC funds were used to leverage and match other grant programs over various time periods, and the windmill was constructed at a later date using funds secured from non-ARC sources. The MECC college administration estimates this program would have been delayed for a year or more without ARC funds.

Considering the total program time period, the amount of the grant was relatively minor compared to other funding sources. ARC's grant primarily supported Energy Technology curriculum development and the purchase of small-scale instructional equipment. Nevertheless, ARC funds were judged to be instrumental to the program. Despite a number of extensions, the grant allowed MECC to complete all aspects of the program and leverage considerable matching funding. The additional monies from the Virginia Community College System, the Virginia Department of Mines, Minerals & Energy, and the Virginia Tobacco Commission, were used to significantly expand the scope of the Mountain Empire Alternative Energy Initiative by installing a larger-scale grid-tied alternative energy system on campus. This system includes the windmill, a solar array, and an energy monitoring system, which have been used for instructional purposes and have served to offset some of the college's ongoing energy costs. From the inception of the program to the present, total program funding exceeds \$1 million.

6.4.4 Economic and Community Impacts

Over time, the grant resulted in the development of seven new Energy Technology courses. One Career Studies Certificate and one Associate Degree program was created and approved by the Virginia Community College System (VCCS). Students can earn an Associate of Applied Science with a specialization in Energy Technology, Certificate in Energy Technology with an emphasis in HVAC, or Certificate in Energy Technology with

⁴⁰ <http://ateec.org/>

an emphasis in Electrical. Career paths from certificate to degree programs were created and allowed MECC to embed the latest technologies in the curricula.

Although program administrators make every effort to monitor what happens to students once they complete the program, they admit it is not always achievable. Student tracking shows that upon program completion virtually all students enter or return to the workforce. Although there have been only four Energy Technology Associate Degrees awarded, most of these students are employed in the region, in the industry or a related industry. According to tracking data available from MECC's PeopleSoft Student Information System (SIS), the program served 253 students. The "students served" figure includes students enrolled in new Energy Technology courses during the grant period (13), as well as high school students participating in outreach efforts for the Energy Technology programs during the grant period (approximately 240).

Since inception, 24 students have enrolled in MECC's Energy Technology programs (Associate Degree or Certificate), and another 17 students have enrolled in individual Energy Technology courses within other degree programs, primarily HVAC & Electricity. MECC has awarded four Energy Technology Associate Degrees and 12 Career Studies Certificates. Unfortunately, as noted above, implementation of the Associate Degree and Certificate was delayed during the VCCS approval process. The Associate Degree program takes at least two years to complete, meaning that the program has barely been in place long enough to begin graduating students. The college anticipates that the number of credentials awarded from these programs will continue to steadily increase. All of MECC's Energy Technology Associate Degree graduates are working in the field, with all but one graduate working for HVAC employers within the MECC service region.

The program is facing new challenges as the industry and workers evolve. Power companies will not hire staff lacking a degree in a related field. Many students who enter the program are already employed. More recently the program is attracting students out of high school, which will present additional challenges. It is also attracting laid-off coal miners who are looking for expanded opportunities in other industries. These may be skilled workers, like welders, who are concerned about the future job market in mining and are looking to expand their opportunities into other industries and grow their skills.

An additional community benefit of the program is the annual Home Craft Days festival, hosted by MECC, which draws tens of thousands of visitors to the campus each fall. Since 2012, MECC has been able to power the festival (food and craft vendors, lighting, etc.) entirely with energy generated by the windmill and solar panels located on campus. Solar and wind energy generated on campus also provides power for parking lot lighting, tennis court lighting, and an instructional greenhouse. Furthermore, MECC's alternative energy monitoring system indicates that since it began operation in May 2012, more than 75,668 pounds of CO₂ have been saved.

MECC continues to invest in the success of the Energy Technology program. The college recently spent its own funds to construct a residential-style demonstration roof, adjacent to the existing alternative energy infrastructure, to support the teaching of proper installation methods for solar (photovoltaic and thermal) energy systems.

Though the project is trending toward success, a number of challenges were encountered during implementation. Because of program delays, the timing of the grant did not coincide with construction of the wind turbine. ARC's grant expired before the

windmill could be built. Additionally, time constraints specified in the grant forced the program to purchase equipment before the search to hire a program expert was completed. Therefore it fell upon existing faculty and energy partners to recommend equipment purchases. As a result, some equipment did not meet the goals of the program as well as it should, and was appropriated for other purposes.

In order to meet the state's lowest bidder purchasing criteria, equipment for the program was purchased from multiple vendors. However a second conflicting regulation was not known to the program administrators. In order to be UL listed⁴¹, installed equipment must be tested and approved from a single manufacturer as a "set of equipment" or "working system." Of course, this is not possible when purchases are made from multiple vendors and thus the equipment purchased could not be installed legally. The educators rightfully decided they would not install unapproved equipment on which to train students. This decision resulted in duplicate equipment purchases.

Hiring faculty was also a challenge. The program had difficulty finding candidates with the proper technical qualifications and therefore did not have a faculty person on board until a year into the program. Since grant funds have to be spent within a specified time period, hiring delays can result in negative consequences to programs.

Coordinating multiple funding sources, including federal sources, to achieve the program goals can be difficult. Each entity may have complicated funding mechanisms combined with short completion windows and high expectations for outcomes. As a result, this program may choose to only apply for equipment grants in the future, since the processes to secure equipment grants are often less burdensome. However, administrators do admit that even applying for equipment funding can involve a struggle to meet proposal deadlines, get new equipment or modifications in place, and demonstrate required outcomes.

In addition to finding the timelines from RFPs to proposal deadlines challenging, this grantee recommends a need for greater flexibility in program implementation. They note that when the potential grantee already has procedures in place that relate to the proposal, implementation is easier. But even when the proposal matches an ongoing situation, challenges can still exist, particularly if the grantee needs to secure permits or needs to go through an internal and/or external approval process. They point out that their institution's proposal cycles and calendars may not coincide with those of the funding agency.

Changes in staff at the funding agency or grantee often lead to programmatic delays, especially when there is an approval process underway. Obviously, when someone leaves, the organization loses expertise and historical perspective. Most agencies will not train a replacement until the person is gone. During this delay, research supporting the proposal may become outdated, need to be updated or at worst, repeated. With deadlines looming, proposal materials can sit on a bureaucrat's desk awaiting action for too long a time.

⁴¹ UL is an independent safety science company. UL Listing means UL has tested representative samples of the product and determined that it meets UL's requirements. These requirements are based primarily on UL's published and nationally recognized Standards for Safety. <http://ul.com/marks/ul-listing-and-classification-marks/promotion-and-advertising-guidelines/specific-guidelines-and-rules/>

6.4.5 Lessons Learned

The lessons learned from this program draw from interviews of program administrators and results of the post-grant evaluation survey.

- **It is easier to use a grant to add a feature to an existing program than to start a new program.** Adding a new aspect to an existing program to make it more marketable in the workplace, for example, a new skill set, is less cumbersome than applying for a new program. However, potential grantees recognize that funding agencies often prefer to fund something new.
- **Sometimes potential grantees must pass on ARC funding opportunities because they do not have an existing project on which to connect the grant.** Though a program may have a strong desire to secure ARC funding, as citizens and taxpayers, grantees only want to undertake projects that will be successful and not waste the agency's funds.
- **Faculty should maintain communication with industry experts to identify which new skills are needed in the field and then add them to the training program.** First and foremost, academic training programs must teach the basic skills of an industry so their graduates are marketable in the job market. However, they should communicate regularly with industry core partners and representatives to learn the new skills and knowledge needed for students to be successful. This program holds two advisory meetings each year with industry experts to identify new competencies to offer in their curricula.

6.4.6 Conclusion

The development of the Energy Technology Certificate and Associate Degree program at MECC provides new skill development opportunities for regional residents. The impact, in terms of number of students served and credentials awarded, is not yet significant enough to stabilize or reverse the devastating economic impact of closures in the mining industry. The Energy Technology program allows MECC to offer its service region with expanded skill development opportunities in emerging fields, and provides the region with a real-world demonstration of effective alternative energy use on the campus. In 2013, the Southwestern Virginia Technology Council recognized MECC for excellence in manufacturing and technology education and environmentally friendly operations.⁴²

6.5 Great Allegheny Passage Economic Development Program

The purpose of this project was to create new business opportunities for residents of the Western Maryland counties around the Great Allegheny Passage Trail and the Chesapeake and Ohio (C&O) Canal Towpath.

⁴² MECC Recognized for Excellence in Technology Education and Energy Conservation. MECC News, 7/8/2013.

ARC awarded a grant of \$100,000 to The Progress Fund of Greensburg, PA in 2008 for this Business/Training project. Local and state funds brought the total funding to \$200,000.

6.5.1 Community Profile

The Great Allegheny Passage (GAP) is a 132-mile system of biking and hiking trails that connects Cumberland, Maryland to McKeesport, Pennsylvania (near Pittsburgh). ARC's grant was designed to create new business opportunities for residents of the Western Maryland counties around the Great Allegheny Passage Trail (shown in the figure below) and the Chesapeake and Ohio (C&O) Canal Towpath.

Figure 27: Great Allegheny Passage Map



Source: Used with permission of Allegheny Trail Alliance.

The Appalachian region is defined as a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi. Appalachian Maryland consists of Allegany, Garrett and Washington Counties, with a combined 2012 population of 253,046 residents. Per capita income in 2012 was \$37,642 or about 86 percent of the U.S. per capita income; 70 percent of Maryland and 105 percent of all of Appalachia. The three counties; Allegany, Garrett and Washington realized per capita income of \$34,547; \$41,083 and \$38,489 respectively or 79 percent; 94 percent and 88 percent of the U.S. per capita average.⁴³

ARC defines the economic status of each county with one of five possible economic designations based primarily on three indicators: three year average unemployment rate, market income per capita, and poverty rate. The statuses are distressed, at-risk, transitional, competitive or attainment. Distressed counties are the most economically endangered and attainment counties are the most prosperous. It defines the economic

⁴³ United States Department of Commerce, Bureau of Economic Analysis, Local Area Personal Income, 2012. Compiled by the Appalachian Regional Commission, March 2014.

The Maryland section of the GAP trail begins in Cumberland and runs through Frostburg, among other Maryland cities and towns. Figure 5 shows the section of the trail in Maryland from Mile 1 to the border with Pennsylvania, just past Mile 20.

GREAT ALLEGHENY PASSAGE TO PITTSBURGH, PA

MASON-DIXON LINE

PENNSYLVANIA

Maryland

Great Allegheny Passage

Frostburg

Big Savage Mountain

24 Miles

Stanton Tunnel

Mc Savage

Barreille

Stokes

Piney Mountain

British

Drum Tunnel

Conowingo

Down

The Narrows

Cumberland

THRUHEAD

C&D CANAL, TOWNSHIP OF WASHINGTON, D.C.

Through the Mountains not over them!

6.5.2 Project Description

A two-year action plan was established as a guidepost for the Maryland Coordinator's scope of work. Elements included organizational and capacity building, community planning and advocacy efforts, regional economic development strategies and trail-wide programs, and regional marketing and public relations strategies. Building on the Trail Town (Pennsylvania) work plan, the Regional Coordinator focused attention on the targeted Maryland communities to promote business development, offer technical assistance to existing businesses, create jobs and assist cooperative marketing of the region as a tourist destination.

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6.5.3 Project Planning and Implementation

The program, which expands business and tourism opportunities in communities along the GAP trail, achieved success in its pilot programs and 2007 implementation in six communities in Pennsylvania. With Maryland communities and the Maryland Department of Planning expressing interest in the program, it seemed a natural fit to expand into Maryland. In 2009, the Maryland Department of Planning organized the expansion of the project into Maryland, which included marketing and planning of the trail building. However, as the business aspect was missing, The Progress Fund was kept on board to maximize the business and tourism development of the communities along the trail.

The initial projected outcomes of the project were to increase business startups and local business revenue, increase trail use, and generally improve amenities along the trail. Specific goals were to have five to six startups per year, increase trail usage by 10 to 15 percent per year, and to track and survey businesses and trail users. The cost estimates for the project were calculated based on the existing project in Pennsylvania and were made up of the cost of personnel, contracts, travel, and facility rental. The Progress Fund looked at opportunities to offset some of the expenses through a variety of methods, such as marketing through local businesses for a reduced price. They also took into account the need for a project coordinator who knew the area well and would be paid full time to be working hands on within the communities.

ARC had assisted in funding the Pennsylvania branch of the project, so The Progress Fund looked to them again for financial assistance. ARC funding was crucial to the Maryland project as most of the other funding used for the Pennsylvania project was not available in Maryland. The project's aims and goals are in line with the mission of ARC, and the funding was essential for the project to be successful. ARC provided a total of \$100,000 to the project, and without these funds the project would not have been able to be completed on such a large scale or attract as much additional funding.

While the project can be considered highly successful, there were a few obstacles along the way. One such obstacle the project had to overcome was difficulties with the electronic trail counting. Due to the unpredictability of nature, there were problems with weathering and weatherproofing that led to inaccurate reports from the devices. Over time, they developed a box in which to secure the electronic counters to protect them from natural forces inhibiting the counting. A system was developed for how often data needed to be collected, and this streamlined system was implemented throughout the trail.

The other major obstacle that was successfully overcome was the certification system for local businesses. Originally, The Progress Fund created two programs that businesses could participate in to increase their business: sustainability certified and trail friendly certified. There was, however, too much disconnect and businesses were mostly participating in one or the other instead of both. Organizers realized the inefficiency of having two programs, and combined the two into one blanket program. In this program, businesses could become part of the "Trail Town Certified Network," which meant they were both sustainable and trail friendly. Once the program was reintroduced, it became successful and popular.

The Progress Fund also developed a communication routine with both ARC and Maryland Department of Planning in order to keep track of where things were going and

make sure that goals were being met. In addition to monthly phone calls with both organizations, they also met with the Maryland Department of Planning in person twice a year to help get refocused and establish a strong and trusting relationship. This rigid communication schedule ensured that the project stayed on track and that all parties were pleased and on the same page with the project's results and direction.

6.5.4 Economic and Community Impacts

The original goal of the Maryland branch of the Trail Town Program was to build on Pennsylvania's Trail Town work plan, focusing attention on the targeted Maryland communities to promote business development, offer technical assistance to existing businesses, create jobs and assist the cooperative marketing of the region as a tourist destination. The program has undoubtedly achieved success in all of these areas.

There have been trail user surveys, business surveys, economic impact studies, and trail utilization and impact surveys completed, as well as yearly reports on trail usage patterns. There have also been a multitude of reports detailing future plans, assessments of Trail Town needs, as well as reports on related community interests such as public art, farmers' markets, and hotel demand. The rigorous amount of research and reporting has provided the organization a great amount of detail on what they have done well, as well as areas where they can improve.

With the success of the Trail Town Certified Network, businesses and trail traffic have increased. Nearly all of the original specific goals for the project have been met or exceeded. Trail traffic has increased by at least 10 percent every year despite technology issues with counting. While there were not always five business startups per year, overall there have been more than 11 new business and 40 new jobs created since 2009. There have also been over 150 jobs and over 40 businesses retained due to the increase in trail use.

Businesses involved in the trail network have seen an increase in business, and businesses have started working together more to market each other and better accommodate visitors. Businesses who participated were rewarded with free marketing, as well as the opportunity to connect with other businesses that were involved throughout Maryland and Pennsylvania, allowing them to receive tips and pointers for improving their business. Participation in the Trail Town Certified Network has more than doubled since its transition from two programs to one.

The implementation of town walk-throughs found areas that were in need of improvements and allowed planners to work more effectively. There have been major safety improvements, including bike planning and infrastructure, trail safety and signage, and street safety. There are now bike racks and pumps available along the trail, and businesses are increasingly going green. Kiosks have gone up in every town, including electronic kiosks in Frostburg and Cumberland. Overall, the project has met all of its goals despite any obstacles and achieved success in unexpected areas.

6.5.5 Lessons Learned

- **Maintain regular communication with all invested organizations.** The Progress Fund organized monthly phone calls with ARC and the Maryland Department of Planning (MDP), as well as twice yearly in person meetings

with the MDP. This regular communication ensured that there was no miscommunication and kept the project on track at all times. There was clear communication regarding any obstacles being faced, which built a strong relationship of trust amongst all parties. Strong communication allowed the project to move forward efficiently and with the approval of all organizations.

- **Do not hesitate to alter original plans to better suit the situation.** While the original plan was to create two certification programs, it soon became clear that having two separate programs was creating confusion and few businesses were participating in both. The Progress Fund then decided the best route would be to rework the original plans and combine the two programs into one. This resulted in a dramatic increase in participation and a much higher rate of success.
- **Document lessons learned in order to avoid repeating mistakes.** Throughout the development of the project, all of the problems and solutions were documented. This ensured that, despite different organizations and employees working on any aspect of the project at any given time, there was a point of reference to avoid making the same mistakes twice. This saved time and effort while providing full transparency between all involved organizations.
- **Some problems take time to fix; take the time to fix them.** While there was an array of problems with the electronic trail counting technology, this was a crucial aspect to recording and reporting trail usage. Through trial and error, and with a lot of time and patience, they eventually developed and implemented a system that maximized the effectiveness of the technology. Despite the unexpected amount of time and effort that was put into the problem, the success achieved was well worth the effort.

6.5.6 Conclusion

The Great Allegheny Passage Economic Development Program's expansion into Maryland was the logical next step after the program's success in Pennsylvania. With support from the Maryland Department of Planning and ARC's grant, The Progress Fund's Trail Town Program successfully developed and increased business in local Maryland trail communities, increased trail traffic, and implemented the Trail Town Certified Network which was enthusiastically accepted. While there were some slight obstacles with technology and the original certification network, all of these problems were successfully overcome with perseverance, communication, and organization leading to overwhelmingly positive results.

6.6 Heartwood Southwest Virginia Artisan Gateway

The purpose of the grant was to fund the design, fabrication and installation of state-of-the-art iconography interior exhibits, media presentations, furnishings and equipment at The Heartwood: Southwest Virginia's Artisan Gateway, highlighting the region's arts, crafts, mountain music, nature, culture and history.

In 2008, ARC awarded a grant of \$1 million to The Heartwood in Abingdon, Virginia; \$500,000 was targeted for building construction and \$500,000 to develop cultural displays. Local funds doubled the available resources bringing total program support to \$2,058,140. This project is classified as a Business/Training project.

6.6.1 Community Profile

Southwest Virginia (SWVA) is a mountainous region in the westernmost part of the Commonwealth. The region is culturally distinct, known for its Appalachian culture, rich in music, craft and natural beauty. The major employment sectors are traditional, extractive industries, notably coal mining and timber, in addition to manufacturing and tobacco. The region has experienced economic distress and employment loss for decades.

Twenty five counties in Virginia are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi. Six of the counties include at least one additional city. Under Virginia state law, all municipalities incorporated as cities are independent of any county.

The 2012 population of Appalachian Virginia was about 765,000 residents. Per capita income in this region was only \$32,701 which compared to about 75 percent of national, 68 percent Virginia and 91 percent of all Appalachia. Per capita income by county ranged from 60 percent of the U.S. average in Grayson County to 104 percent in Botetourt County.

From 2010 to 2012 the average unemployment rate in Appalachian Virginia was 8.4 percent; considerably higher than the 6.5 percent rate for Virginia, though just below the 8.9 percent for both the U.S. and the entire Appalachian region. The Virginia counties with the lowest unemployment rates were Bath and Botetourt counties (5.8 percent and 5.9 percent respectively); the highest rate (13.1 percent) was in Henry County, which includes Martinsville city.⁴⁵

ARC defines the economic status of each county with one of five possible economic designations based primarily on three indicators: three year average unemployment rate, market income per capita, and poverty rate. The statuses are distressed, at-risk, transitional, competitive or attainment. Distressed counties are the most economically endangered and attainment counties are the most prosperous. Though no county was deemed distressed, the lowest possible designation, 23 of the 25 Appalachian counties in the Commonwealth were defined as either at-risk or transitional. That left only two of the counties in the region to receive the higher economic statuses of competitive (Bath County) or attainment (Botetourt County).

6.6.2 Project Description

In 2008, ARC awarded a grant of \$1 million to The Heartwood: Southwest Virginia's Artisan Gateway in Abingdon, Virginia. \$500,000 was targeted for building construction and \$500,000 to develop cultural displays. Local funding doubled the available resources to \$ 2 million. The funds were part of Heartwood's initial \$17 million program allocation

⁴⁵ Alleghany County includes Covington city; Carroll County includes Galax city; Henry County includes Martinsville city; Montgomery County includes Radford city; Rockbridge County includes Buena Vista city and Lexington city; Washington County includes Bristol city; Wise County includes Norton city.

which came from the Commonwealth of Virginia, ARC, the Virginia Tobacco Commission and various localities.

The 29,000 square-foot facility, located off I-81 near Virginia Highlands Community College opened in July 2011. The structure, appearing like an abstract barn with a glass-and-metal silo entrance, houses a regional artisans' retail center and six interpretive galleries to showcase the talents of area artisans. The facility includes a large demonstration/performance space, office space, a cafe featuring locally-grown food, and seating for 150 diners. The project was spearheaded by 'Round the Mountain: Southwest Virginia's Artisan Network (RTM).

ARC funds were used for the design, fabrication and installation of state-of-the-art iconography interior exhibits, media presentations, furnishings and equipment highlighting the region's arts, crafts, mountain music, nature, culture and history. The exhibits include a large three-dimensional map image of the region with particular features highlighted for display, and audio-visual capabilities to see and hear the story of Southwest Virginia (SWVA)

6.6.3 Project Planning and Implementation

Heartwood evolved from a vision to reestablish the economic base of the area by capitalizing on the region's unique assets. It would serve as a gateway to the region's rich heritage of music, crafts and natural beauty; a cultural and community resource bringing assets and quality of place to attract visitors, retain residents and increase human capital.

Tourism was not the planners' number one objective. Nevertheless, Heartwood Artisan Gateway was expected to attract more than 270,000 visitors, generate \$2.2 million in revenue and generate 300 businesses in its first three years. Heartwood was part of the overall vision to develop a quality of life to attract entrepreneurs and high-tech businesses to the region.

SWVA shared one particularly troubling economic challenge with other distressed areas: a decline in number of college-educated young people – presumably the region's "best and brightest." An overall goal of the program was to attract white-collar, educated young people who would relocate their businesses or move to the area for non-traditional 21st century jobs. Most communities experience a relative balance of outgoing college-aged students and incoming college-aged residents. The numbers of young educated individuals who go to college and don't return is countered by the number moving into the area. However, economically depressed areas discover that more well-educated young adults depart than reenter. There is a fear among local parents that their children are going to leave for college and not come back. The result is a net loss of college-educated young people. The college-educated population represents only 17 percent of the total population in this region compared to more than 36 percent of the residents in more affluent areas. For the entire U.S. the proportion is 29 percent.⁴⁶ One yardstick of this project was to increase the number of college-educated individuals in the region.

⁴⁶ ARC data and 2012 American Community Survey data.

Human capital is seen as an integral part of economic development with the shift to a more knowledge-based economy. According to Richard Florida⁴⁷ and other experts, when a community attracts the “creative class” and increases human capital, it sees greater economic growth. Those that do not will continue to decline economically.

The revitalization efforts centered around securing new businesses, generating new jobs, increasing the number of people employed and attracting tourism to the area. The local tax base would increase, positively impacting regional communities, businesses and workers.

Development officials preferred to attract year-round residents over short-term visitors. Their goal was to increase the number of individuals physically living in localities rather than boosting the number of seasonal residents or encouraging tourists to lodge one more night at a local bed and breakfast. They intended that individuals buy homes or cabins in the area rather than rent cottages for the summer, thereby building communities and developing pride in their towns.

One target of this mission was to attract advanced “anywhere businesses” – establishments that could be located in any community so long as they had access to cutting-edge business features such as quality fiber optic connectivity and high speed internet. The hope was to attract owners of these types of businesses or entrepreneurs, lured by the region’s quality of life, including outdoor recreation (hiking and biking trails, rock climbing, and river sports), quality restaurants, cultural amenities, wineries, craft breweries and coffee shops. These businesses would advance the economy of the region and attract a high-level workforce.

Tourism, though not the primary program objective, was encouraged as a means to attract potential residents. Officials targeted what they considered “quality” tourism. For example, regionally stereotypical themed recreation was not encouraged and officials suggested there would be no public funds for it.

Developing a recognizable consumer brand “Southwest Virginia, Authentic, Distinctive, Alive,” was a key part of the overall vision. The catchphrase was modeled after the successful branding by West Virginia of “Wild and Wonderful West Virginia.” Heartwood, as the area gateway, would bring the concept to life.

Heartwood was the middle part of a multi-phase development program. The Crooked Road, linking the region’s musical destinations, may be considered Phase I of the program. Heartwood was Phase II, including the \$1 million from this ARC grant. Phase III involving the ‘Round the Mountain artisan network was supported by a federal grant of \$815,000, which included \$500,000 from the Commerce Department’s Economic Development Administration, \$215,000 from the United States Department of Agriculture and \$100,000 from ARC. Combined with support from the Virginia Tobacco Commission, the Phase III program had resources of more than \$1 million for a set of regional initiatives designed to develop Southwest Virginia’s “creative economy.”

⁴⁷ Richard Florida, “The Rise of the Creative Class,” *The Washington Monthly*, May 2002, pp. 15-25.
[http://ipv4.os3.nl/media/2009-2010/courses/icp/richard florida - the rise of the creative class.pdf](http://ipv4.os3.nl/media/2009-2010/courses/icp/richard%20florida%20-%20the%20rise%20of%20the%20creative%20class.pdf)

Resistance to the Project

Some state, regional and sub-regional tourist organizations felt threatened by Heartwood, which they perceived as competing for tourist dollars. There was a need to convince these entities that they shared common interests and the tourism market could support all of them. There was a belief that some local residents subscribed to a “mentality of scarcity.” They perceived the economic pie as fixed in size, therefore if someone got more of it, someone else must be getting less. Program administrators at Heartwood felt compelled to counter this mentality and promote what they considered a “mentality of abundance,” stating current revenues were sufficient and would grow over time with more than adequate returns for all partners.

There was skepticism among regional tourism organizations that Heartwood, a single location tourist site, would serve all 19 counties. Program administrators had to convince these local organizations that the program supported tourism throughout the region and the program funds would be used to cross-promote artists in music, food, crafts, and theater, along with other entities and ad-hoc groups.

Getting tourism organizations to agree with the program goal of encouraging people to move to the region was a challenge. Tourism organizations see their primary function as promoting tourism, not relocation.

A conflict between two area sub-regions spilled over to obstruct the Heartwood program. To the west of the Clinch River, the “coalfields” residents historically felt economically neglected, and begrudged their neighbors to the east in the “Blue Ridge” region. Past efforts at regional cooperation met marginal success. However, the Crooked Road project, with Heartwood as its base, was the first to bridge this gap successfully. The collaboration persisted, paving the way for other successes, including the “Appalachian Spring” and “Round the Mountain” projects. The Heartwood project was the first to show that these two regions could address common challenges and opportunities, according to project administrators.

Concern was expressed that Heartwood might become an endpoint for visitors rather than a launching pad to artist outposts, depriving local artists of sales. Others considered the program elitist and too highfalutin for the area. Some thought the Southwest Virginia region did not deserve a facility as nice as Heartwood.

Program developers perceived unwillingness among some local government officials to support new projects, and in particular Heartwood and related programs. They were disinclined to fund projects with long-term payoffs that would not generate short-term revenues.

In addition, local governments and residents lacked the vision of planners – they were unable to picture their towns looking differently in the future. They could not assess the town’s assets and imagine them transposed. City planners had these skills – they could picture major changes, envision new hotels, restaurants and stores where currently there were only run-down buildings. They could envision relocating the town’s center, if required. It took financial evaluations of the project to show regional officials and others that growing revenues from the project were keeping property taxes low, something officials could get behind.

Words can also be a problem. The term “sustainability” was controversial, and was avoided in materials and discussions describing Heartwood. To some, policies promoting the concept of “sustainability” are seen “as a sinister effort to undermine American values and install socialist policies that eliminate private property,” as described in a Southwest Virginia Tea Party newsletter in 2011. To avoid controversy, in reports, marketing brochures and program descriptions the term “self-reliant” was substituted.

Resistance also came from residents concerned over the level of taxpayer funds supporting the project. They also argued that prices for items at the Heartwood venue were out of range for local residents.

6.6.4 Economic and Community Impacts

Heartwood visitors may purchase products from regional artisans, with additional purchases made via the internet, on-site visitations to artisan studios, craft galleries and other regional venues. The facility incorporates space for visitor services where tourists can learn about the region's arts, crafts, music, outdoor, historic and other cultural assets, such as The Wilderness Road and The Crooked Road. The facility also provides assistance on travel arrangements, accommodation, route planning, and other general information. Heartwood provides a central location for artists to market their wares and reach a broad audience. It also serves as a gateway for exploration of the region.

It is difficult to disaggregate impacts from the Heartwood facility from impacts resulting from preceding and follow-up projects, as programs had multiple funders and grants that overlapped and/or operated concurrently. Regionally, revenues from meals and lodging taxes increased by an average 60 percent and more than 100 businesses were created.

The Crooked Road Music Trail, a project preceding Heartwood, has created an estimated 445 full-time equivalent jobs and infused \$22.8 million in annual revenue to the region since 2004.

Heartwood returns 85 cents of every dollar generated through craft, local food, music and literature directly back into identifiable people, according to a local radio report aired in 2012.

Though not anticipated initially, the Heartwood facility has become a regional meeting place. It currently houses the Southwest Virginia Cultural Heritage Commission, ‘Round the Mountain: Southwest Virginia Artisan’s Network, The Crooked Road: Virginia’s Heritage Music Trail and the city’s tourist department.

Though visitation has fallen short of anticipated goals, program managers aspire to increase tourism to meet program expectations. They emphasize that unlike adjoining states, a lack of signage on the interstate highways promoting the region hampers tourism. In their efforts to get signs posted, a question arose over which federal or state agency retains authority over the placement of highway signage. To date, the answer is unclear and signs remains un-posted.

An economic assessment by Friends of Southwest Virginia detailed tourism impact, meals and lodging tax revenue, and employment trends for SWVA from around 2004 to

2012.⁴⁸ Commenting on the results, project officials characterized the acceleration in growth as “phenomenal.”

Did the Heartwood and related projects move the needle by slowing or reversing the regional exodus of young college-educated individuals? The report demonstrates a slightly higher increase in 25-34 year olds with a college degree in the region compared to neighboring Western North Carolina from 2000 to 2012. The increases were not widespread throughout the region, as many localities reported declines. However, the report does note communities that experienced growth in residents with college degrees are similar to those communities with high travel expenses or that experienced high increases in travel expenditures. These areas also saw large increases in local meals and lodging tax revenue. The correlation shows that the same assets and quality of place that attracts visitors and tourism to certain communities in Southwest Virginia also attracts and retains residents and increases human capital. Furthermore, the authors argue that the quality of life in Southwest Virginia has played a role in attracting “anywhere businesses” to the region and allowed them to attract talented employees.

Heartwood’s administrators assert that the program brought multiple groups together in cooperation – a collaboration of theaters, farmers, crafts persons, musicians and others – who formerly saw themselves as competitors. Heartwood sees itself as a facilitative entity to bring about collaboration of stakeholders, fulfilling an important program goal. It is spurring job creation and new businesses while at the same time boosting local revenues.

6.6.5 Lessons Learned

Lessons learned were drawn from interviews with program administrators.

- **Companies with little history in the region may relocate without notice.** A high-profile company responsible for creating hundreds of local jobs suddenly relocated its call-center overseas in response to lower workforce costs. Costs incurred by the locality to make infrastructure changes to accommodate its workforce were squandered.
- **Issues of program identity must be addressed.** The marketing campaign to support the program was misconstrued. Anecdotal information showed sizable numbers of people were aware of the Crooked Road music trail but believed incorrectly that it was located in West Virginia or Tennessee.
- **Regional economic development and tourism officials must understand that the program brand belongs to them, not the grantee.** Though the program may be supported by state and regional entities, it is important that local officers appreciate it is not imposed on the region by the state, but involves local planning, local development, and local tourism organizations.
- **The concept that music, crafts and outdoor recreation are part of a three legged stool and should be partners in tourism promotion is growing among tourism administrators.**

⁴⁸ Southwest Virginia, Authentic, Distinctive, Alive: SWVA Economic Analysis Report, Friends of Southwest Virginia, circa 2012. <http://www.cppdc.com/Reports/SWVA%20Economic%20Analysis%20Report.pdf>

- **Program benefits often take more time to generate than expected.** Despite the best intentions, some short-term outcomes do not pay off by the end of the grant period, but do become long-term successes. Granting agencies and evaluators should have faith in the risk, be flexible and have patience – and realize some programs take time to work.
- **Business creation that yields multiple smaller entities may, in the long run, be a better investment and entail less risk than funding one large business that may or may be sustainable.**
- **Traditional measures of success will not apply to all programs.** Occasionally, more qualitative and/or long-term outcomes are better indicators of achievement. For example, a high number of jobs created may or may not be a good thing. Are multiple small enterprises better for the community than one large business that employs many workers at relatively low wages?
- **The goals of the community are important and may not coincide with outcomes measured by program auditors.** The community may want to stop the “brain drain” in their region, though that is not necessarily what auditors understand or investigate.
- **ARC surveys need to be delivered to the correct individual.** Sometimes the contact person, such as the Program Director, or Construction Manager cannot speak to the overall issues regarding the project.

6.6.6 Conclusion

Officials note that without ARC funding for Heartwood and its preceding phase, the programs would not enjoy today's successes. Heartwood, they note with particular pride, laid the groundwork for subsequent initiatives including the Ralph Stanley Museum, dedicated to the local bluegrass musician and legend. ARC funding has been leveraged into \$40 to \$50 million in additional regional investment.⁴⁹

Heartwood demonstrated that asset-based development could work by initiating a self-reliant program in a rural area suffering economic and physical distress but blessed with cultural assets and abundant natural resources. Heartwood serves as a blossoming tourist destination for heritage tourism and a positive force for the area.

Heartwood shows that a facility can serve almost 20 counties with a multitude of highly motivated collaborative partners. It boosted tourism, generates pride in the community, and serves as a model for other communities and states. To date, Heartwood and the related series of projects have succeeded in creating hundreds of businesses, several thousand jobs and boosted local revenues.

⁴⁹ Personal communication with Todd Christensen, Executive Director of the Southwest Virginia Cultural Heritage Foundation.

6.7 MARC Custom Medical Products, Western North Carolina

The Marketing Association for Rehabilitation Centers (MARC) is a 501(c)(3) nonprofit corporation whose purpose is to serve people with disabilities throughout a 21-county region of Western North Carolina. MARC serves by developing and implementing collaborative programs among its 14 member organizations located throughout this service area. Their services include food processing, commercial sewing, plastic thermoforming, embroidery services, form fill and seal, medical products, packaging services and product assembly. MARC was founded in 1978.

MARC's Custom Medical Products (MCMP) program is an innovative rural development strategy deployed by MARC in July 2006. MCMP joins six MARC member Community Rehabilitation Programs in a partnership to manufacture custom disposable surgical drapes and other products used in the healthcare industry. The key objective for this venture is to create manufacturing jobs with a majority targeted for people with disabilities.

ARC has provided grant support to the MARC and specifically MCMP since 2006. The MARC grants were categorized as Business/Training. ARC has provided two grants totaling \$400,000 (\$200,000 each in FY 2007 and FY 2009) which were leveraged to provide an additional \$2.6 million in grant support and direct "first money in" from MARC member organizations. The initial grant funding was matched by direct and indirect member investment of \$838,000 over the duration of the project. Total funding was expected to approach \$4 million from other sources, with the additional monies restricted to capital equipment and renovations.

Figure 29: MARC Surgical Drape Manufacturing



Source: Used with permission of MARC, Inc.

MARC serves as a catalyst for innovations that improve the economic and social quality of life for people with disabilities and disadvantages. MARC believes that all individuals have the right to be respected, to have equal opportunities, to work and to earn a fair wage. MARC's Board of Directors and staff support the concept that through meaningful, satisfying work, people are able to live more independently, successfully and productively.

6.7.1 Community Profile

MARC includes 14 member organizations that collaborate in program planning, fundraising, implementation and review to achieve their joint goals. Twenty-nine counties in Western North Carolina are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi. All 21 counties served by MARC member organizations are part of the Appalachian Region. Table 34 lists the MARC programs and the counties they serve.

Table 11: MARC Members and North Carolina Counties Served

MARC Program Member	Western North Carolina Counties Served
Ashe County ADAP	Ashe
Caldwell Opportunities, Inc.	Caldwell
Foothills Industries of McDowell County	McDowell
Goodwill of Northwest North Carolina	Buncombe; Madison
Haywood Vocational Opportunities, Inc.	Haywood
Industrial Opportunities, Inc.	Cherokee; Clay; Graham
LifeSpan Services, Inc.	Wilkes
Polk Vocational Services, Inc.	Polk
Rutherford Life Services, Inc.	Rutherford
Transylvania Vocational Services, Inc.	Transylvania
Vocational Opportunities of Cherokee, Inc.	Jackson; Swain
Vocational Solutions of Henderson County	Henderson
Watauga Opportunities	Ashe; Avery; Mitchell; Watauga; Wilkes; Yancey
Webster Enterprises, Inc.	Jackson; Macon; Swain

Source: MARC, Inc. and ARC.

Appalachian North Carolina is one of the poorest regions in North Carolina, in Appalachia and in the U.S. The 2012 population of the region was about 1.7 million residents who realized per capita income of only \$34,215, which was about 78 percent of national, 90 percent of North Carolina, and 95 percent of all Appalachia per capita income.⁵⁰ Per capita income ranged from around \$27,000 in Graham County (61.7 percent of U.S. average) to around \$40,000 in Polk County (92.0 percent of U.S. average). Per capita market income, a measurement of income that excludes transfer

⁵⁰ United States Department of Commerce, Bureau of Economic Analysis, Local Area Personal Income, 2012. Compiled by the Appalachian Regional Commission, March 2014.

payments, was lowest in Cherokee County (around \$16,000 or 45 percent of U.S. average) and highest in Forsyth County (around \$32,000 or 87 percent of U.S. average).

The percent of the population that represents that they suffer from a disability ranges from nine to 22 percent and the MARC-county average of 16 percent is three percentage points higher than the state as a whole.⁵¹

ARC defines the economic status of all of these counties as at-risk, distressed or transitional. No counties in Appalachian North Carolina received the higher economic status of competitive or attainment.⁵²

6.7.2 Project Description

MARC's Custom Medical Products (MCMP) puts together and bundles medical products using customized work stations to optimize work flow in a controlled manufacturing environment. Among its accreditations and certifications are United States Department of Agriculture Food Packaging Plant certification, Total Quality System Audit (TQSA), ISO 9001 (Manufacturers and Designers), ISO 13485 (Medical Products Manufacturers)⁵³ and regulation and audits by the Food and Drug Administration. MCMP specializes in medical grade sewing and thermoformed products.

The 14 community rehabilitation programs in MARC's consortium providing vocational rehabilitation, developmental services, and employment for people with disabilities, disadvantages and other barriers to employment have been Western North Carolina's primary source of these services since 1978. The top objective of the programs is to bring an improved quality of life through work experiences. The program is designed to create more opportunities for individuals with disabilities and their caregivers while reducing unemployment and underemployment and dramatically improving their quality of life.

Figure 30: Automated Fabric Cutter in Use at MARC Custom Medical Products



Source: Used with permission of MARC, Inc.

The programs reflect the local culture, resources and distinctiveness of their communities, while structured along common program formats and adhering to the same state and federal guidelines. The most common services and programs among members

⁵¹ United States Census Bureau, 2010-2012 American Community Survey.

⁵² County Economic Status Fiscal Year 2012, Appalachian Regional Commission.

⁵³ ISO is an independent, non-governmental international organization with a membership of 162 national standards bodies. Through its members, it brings together experts to share knowledge and develop voluntary, consensus-based, market relevant International Standards that support innovation and provide solutions to global challenges.
<http://www.iso.org/iso/home.htm>

are Vocational Rehabilitation Services supported by the North Carolina Division of Vocational Rehabilitation and Adult Developmental Vocational Program services provided through the support of the North Carolina Division of Mental Health, Developmental Disabilities and Substance Abuse Services. Other services and programs include Child Day Care services to offender community re-entry programs.

A contemporaneous article in Today's Medical Developments reported the program was designed to create or retain 250 jobs, primarily for people with disabilities in the 17 westernmost counties of North Carolina. It was also intended as a base for rural entrepreneurial development through manufacturing in small towns located in those counties.

6.7.3 Project Planning and Implementation

One of the 14 MARC programs, Haywood Vocational Opportunities, Inc., operated a medical supply manufacturing business prior to 2005 and was experiencing capacity constraints. At a meeting of all MARC programs, the potential for expanding the medical supply business was discussed. Eleven members indicated interest in forwarding a collaborative effort in medical supply manufacturing and eventually the MCMP was formed in July 2005. Today, six of the 11 original members are part of the medical products manufacturing consortium, operating six facilities across Appalachian North Carolina.

The MCMP members commissioned a strategic marketing study to determine if the market for these products would continue to grow and if they would have an opportunity to serve this market. The team developed a business plan and proceeded to seek funding. Facility development and cost estimates were provided by their existing medical supply partner, Haywood Vocational Opportunities. Initial funding came from cash and in-kind support provided by MCMP members. The full funding plan is shown in Table 12.

Table 12: MARC Custom Medical Products Funding Table, July 2006 – February 2011

Funding Source	Status	Amount
MCMP Member Dues (Cash)	Dues Paid	\$305.000
ARC MCMP Support	Awarded-Completed	\$200.000
ARC Quality & Business Development Grant (MQ&B)	Award in Process	\$200.000
Advantage West. EDI Grants	Awarded-Completed	
NC Rural Economic Development. R&D Grant	Awarded-Completed	
NC Rural Economic Development. ESI Grant	Award in Progress	\$400.000
Golden LEAF Foundation	Awarded-Completed	\$605.000
Golden LEAF Foundation. Economic Capacity Grant	Awarded-Completed	\$250.000
Janirve Foundation	Awarded-Completed	\$300.000
NC Department of Commerce. Economic Development	Awarded-Completed	\$487.000
Z. Smith Reynolds MQ&B Support	Awarded-Completed	
Z. Smith Reynolds MARC Parity Initiative	Award in Process	\$137.000
<i>Total Cash from Funding Partners & MCMP Members</i>		<i>\$3,013.000</i>
<i>Total In-Kind from MCMP Members</i>		<i>\$1,552.144</i>
Total Project 5-Year Investment of MARC & Funding		\$4,565.144

Source: MARC, Inc.

The MCPM program partners initiated the program in 2005 with an implementation plan and business plan that they expected to complete in three years. Cash dues and in-kind services from the partner organizations allowed them to begin fundraising and implementation. As one of their partners already operated manufacturing facilities in this industry, the implementation proceeded much like an expansion of an existing enterprise rather than a new enterprise. MCMP hired a president in 2006 to oversee the implementation process. The membership conducts monthly meetings to assess progress and plan future activities.

The initial membership in MCMP included 11 rehabilitation program organizations. Some determined that this project was not in their best interest for financial, staffing or other reasons and eventually the final group consisted of six organizations. Each opened facilities in their respective counties over the next three years. While each organization is independent, the collaborative nature of their process allowed each organization to benefit from the experience of the others.

The MCMP hired an outside consultant to assist with market research and business planning. While their collaborative social enterprise was different from most organizations in this industry, they needed to be able to compete on price and quality if they hoped to

retain customers. The fact that Haywood Vocational Opportunities had already developed a client base and understood the markets gave the five new producers the expertise they needed to compete. Initially, they operated on subcontracts with Haywood Vocational Opportunities, but eventually earned their own contracts.

Providing products in the medical supply industry required a focus on quality control. All products were required to meet high industry standards and clients needed assurance that such standards were met. Thus, the MCMP initiated a Quality Control Management System which has led to the issuance of nine ISO 9001 and 13485 Registrations. The former is the most widely used Quality Management System standard in the world, supported by eight universal management principles; the latter are the international Quality Management Systems for the design and manufacture of medical devices. MARC maintains a quality assurance audit system with certified auditors conducting independent audits of all administrative and manufacturing operations.

6.7.4 Economic and Community Impacts

The execution of their plan began to see results as staff were trained and facilities came on line. In 2005, the enterprise had about 750 employees and commercial sales of \$36.8 million. By FY 2014, the MCMP had added 282 new jobs and retained another 157 jobs. Revenue was now \$58.7 million. Commercial sales of its products and services were used to generate excess funds for its member nonprofit organizations. The excess funds provided development programs for its client population and sustain program administration and management functions.

In March of 2009, the College of Business at Western Carolina University (WCU) conducted an economic impact study for the MARC enterprises.⁵⁴ The WCU researchers evaluated 2008 MARC financial data, surveyed MARC members and surveyed MARC employees. This research estimated that:

- In 2008, MARC had an economic impact of \$60.7 million on the 21 counties it serves
 - This included \$45.8 million direct impacts
 - \$7.5 million indirect impacts
 - \$7.4 million induced impacts
- The annual economic impact per job created was \$58,814
- In 2008, jobs created by MARC had an average hourly wage of \$10.39 (\$11.46 in 2014 dollars)
- In the MARC region, there was a 50.1 percent higher occurrence of employment for persons with a disability than the national average

The MARC has achieved operating profits of about \$2 million in each of the past five years. These funds are all reinvested in MARC programs in the 21-county service region.

⁵⁴ Inhyuck Ha, Ph.D., Jessica L. Hollars, *Economic Impact of the MARC on Western North Carolina's Economy*, Western Carolina University.

6.7.5 Lessons Learned

MARC is a successful collaborative social enterprise that has provided employment opportunities in the economically challenged region of Western North Carolina for disabled, disadvantaged and other workers. MCMP is an extension of the medical supply manufacturing enterprise operated by one member of MARC to five other members. Some of the lessons learned from the expansion include:

- **Collaborative organizations provide support for expanded enterprises.** One member of MARC operated a successful medical supply manufacturing enterprise. This organization brought the opportunity to other members to expand this enterprise in their own regions. The existing market knowledge and technical experience allowed other collaborative partners to overcome traditional barriers to entry and start medical manufacturing operations in their regions.
- **Develop a collaborative culture.** The MARC collaborative approach extends to almost forty years of carefully negotiated agreements to achieve a positive outcome for all parties. MARC has worked closely with their counties, municipalities, local development districts, and state labor department to bring all ideas and perspectives to the table and distill them into a plan on which all stakeholders could agree. This collaborative approach is continuing as the project expands opportunities and creates jobs.
- **Use of outside consultants assisted in developing a sound business plan.** The MARC is a social enterprise managed mostly by professionals experienced in extending vocational and social support to segments of the population who have physical and socioeconomic challenges. It was a critical step to seek support from business professionals with experience in the medical manufacturing business to create a business plan that they could manage and measure progress against.
- **Both enterprise and vocational training program benefits can be realized through a single training program.** A critical service provided by the MARC members to its communities is vocational training. Operating medical manufacturing facilities allowed the training to evolve from classroom to on-the-job training to employment.
- **Cost control and quality assurance are fundamental to the enterprise.** The cost structure of MCMP facilities can be higher than competitors due to the nature of its workforce. They must control cost and assure quality simultaneously. Another ARC grant is assisting MCMP members to receive and maintain ISO registrations.

6.7.6 Conclusion

The Marketing Association for Rehabilitation Centers (MARC) is a 501(c)(3) nonprofit corporation whose purpose is to serve people with disabilities throughout a 21-county region of Western North Carolina. MARC's Custom Medical Products (MCMP) program is an innovative rural development strategy deployed by MARC in July 2006. MCMP is a collaborative social enterprise where six MARC member Community Rehabilitation

Programs manufacture custom disposable surgical drapes and other products used in the healthcare industry. The key objective for this venture is to create manufacturing jobs with a majority targeted for people with disabilities.

ARC has provided grant support to the MARC and specifically MCMP since 2006. The Commission has provided two grants totaling \$400,000 which were leveraged to provide an additional \$2,610,000 in grant support and direct “first money in” from MARC member organizations. This support contributed to the development of a training program for people with disabilities and the promise of permanent, rewarding employment.

6.8 Strengthening Appalachia’s Farmers’ Markets

The Ohio State University (OSU) South Centers worked with farmers’ markets managers to develop customized marketing strategies and tactics. Through one-on-one technical assistance, the program assisted Appalachian Ohio farmers’ market managers and their vendors/producers implement marketing best practices, create a regional identity, develop marketing plans and sustain their markets. Positive economic and social impacts were realized.

6.8.1 Community Profile

Thirty-two counties in Ohio are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi.

In 2012, the more than 2 million residents of these 32 counties of Appalachian Ohio realized per capita income of only \$32,893, or about 75 percent of national, 82 percent of Ohio, and 92 percent of all Appalachia in per capita income. Per capita income by county, compared to the U.S. average, ranged from 51 percent of the national average in Noble County to 88 percent in Clermont County.⁵⁵

ARC defines the economic status of each county with one of five possible economic designations based primarily on three indicators: three year average unemployment rate, market income per capita, and poverty rate. The statuses are distressed, at-risk, transitional, competitive or attainment. Distressed counties are the most economically endangered and attainment counties are the most prosperous. In 2012, the 32 counties of Appalachian Ohio received ratings spanning the three lower designations: at-risk (nine counties), distressed (seven counties) or transitional (16 counties). None of the state’s Appalachian counties received either of the higher economic statuses of competitive or attainment.⁵⁶

Between 2008 and 2012, roughly 338,000 individuals lived below the poverty level in the counties of Appalachian Ohio, experiencing a poverty rate of 17.1 percent, compared to 14.9 percent for the U.S. (115 percent).⁵⁷ In 2012, their 8.3 percent unemployment rate

⁵⁵ United States Department of Commerce, Bureau of Economic Analysis, Local Area Personal Income, 2012. Compiled by the Appalachian Regional Commission, March 2014.

⁵⁶ County Economic Status Fiscal Year 2012, Appalachian Regional Commission.

⁵⁷ Poverty Rates, 2008-2012, Appalachian Regional Commission.

was slightly above the U.S. average of 8.1 percent, exceeding the overall Ohio rate (7.2 percent) by more than a percentage point.⁵⁸

6.8.2 Project Description

The focus of the project was to provide resources, education, training and technical assistance to farmers' markets managers, vendors and producers in Appalachian Ohio thereby increasing market share, sustainability and jobs. It also benefited consumers by providing greater access to healthy locally produced foods.

ARC awarded a grant of \$75,000 to OSU South Centers for the project. Additional local sources brought the total project funding to \$150,157. This project was categorized in the Local Food project type.

6.8.3 Project Planning and Implementation

By 2008, interest in farmers' markets began to take off and questions from potential and recent businesses clients to the Ohio State University South Centers, part of its small business development network, escalated. Inquiries included how to start a farmers' market, how to run a successful market, how to insure product safety, how to comply with state regulations on labeling and what were the best practices in designing marketing labels.

The markets were being run primarily by the farmers as direct outlets to consumers. This presented an opportunity for producers to sell directly at retail and earn full-fare consumer dollars, compared to the more traditional, though less-profitable paradigm, of selling to wholesalers and middlemen at a discount.

In addition, farmers' markets were also managed by Main Street Programs, economic development organizations, health departments and others. Compared to those managed by farmers, these farmers' markets enjoyed improved stability as a result of paid staff.

An issue most critical to the farmers' markets was how to get the word out that the markets existed. This was particularly important for new operations. It was understood that the first few months of operation were decisive for success. If a farmers' market did not attract enough vendors to supply it with product, consumers would stop shopping there. And if the market was unable to draw an ample supply of customers, the vendors would dry up. The program was designed to address this very real "Catch-22" situation; one that easily could result in the failure of the market.

Clients were identified through county extension programs, economic development agencies, local Chambers of Commerce, Main Street Programs and word-of-mouth.

Technical assistance included development of a marketing toolkit to help identify items in high demand, tactics to maximize profits by product placement, and how to implement effective promotional strategies. Face-to-face meetings, workshops and group training sessions were held with market managers and vendors to assist with implementation of best practices, marketing plans and additional areas of business management.

Producers needed new marketing strategies, as some transitioned from tobacco or

⁵⁸ Unemployment Rates, 2012, Appalachian Regional Commission.

commodity production, where product was sold to regional auction houses or grain elevators, to direct marketing to the end consumer. Customizable media materials included rack cards, press releases, flyers and bookmarks. The market manager could easily customize the materials by gathering local demographic information. Printing costs were assumed by the farmers' market. Events calendars and a location map were also generated.

This project could not have been completed without ARC funding, though it was supplemented with funds from a United States Department of Agriculture Agricultural Marketing Service (USDA/AMS) farmer's market promotional grant. ARC funds were used for staff time (for training, technical assistance and design of marketing materials) and to develop and print 3,000 copies of the popular map showing the locations of all farmers' markets in the Appalachian Ohio (Figure 8).

Figure 31: Map of Locations of Appalachian Ohio Farmers' Markets



Source: Used with permission of The Ohio State University South Centers

6.8.4 Economic and Community Impacts

The project assisted Appalachian Ohio farmers' markets, local food producers and the public by leveraging its expertise and staff to meet program goals. It met its overall mission to support small business development in the state and improve the lives of Ohio citizens by assisting in their education and economic conditions. The program afforded the opportunity to benefit farmers' markets in distressed economic areas, an emerging group of clients for the organization.

Outputs and suggested improvements to the program are based on actual responses to a survey of participants and observations of the project team compared to defined program goals.

Twenty farmers' markets in 20 communities were served, receiving 460 hours of technical assistance. Almost three-quarters (72 percent) of market managers indicated the resources provided were effective for their farmers' market; 75 percent acknowledged increases in their knowledge of marketing; and 56 percent indicated they have implemented best practices learned in the course of the project.

The program improved 10 communities and 160 businesses. A total of 105 agricultural jobs were created or retained; 30 jobs were created, exceeding expectations; 75 jobs were retained. Six businesses were created and 160 retained.

Leveraged investment in excess of \$70,500 topped expectations. Revenues, as a result of the program, were up \$18,600; costs were reduced by \$10,000.⁵⁹ OSU South Centers was able to secure additional funding from the USDA/AMS Farmers' Market Promotion Program in 2012 to continue to work with Ohio farmers' markets, vendors and producers.

The communities where farmers' markets are located realized additional non-economic benefits. Farmers' markets provide a safe and non-threatening area where all members of a community can come together and interact. This helps build social capital for the communities, according to research at the national level. There is also evidence that farmers' markets assist individuals with improvement of their diets (i.e. the consumption of more fresh fruits and vegetables) also benefitting communities.

6.8.5 Lessons Learned

The lessons learned were drawn from interviews of program administrators and survey responses from a post-program questionnaire conducted by an ARC contractor.

- **Focus is needed on the incubator aspects for local food producers who direct market their products through farmers' markets.** Information and technical assistance on the resources available to take their business to the next level should be provided to this audience.
- **A program focused on serving the individual producers in best business practices is recommended by the program administrator.** This would benefit not only producers, but also the farmers' markets in which they participate. The communities in which the markets are located and where the producers reside, and the consumers who purchase their fresh and healthy local foods would also gain.
- **Farmers' markets are mostly staffed by volunteers who may not have the time to complete the formal marketing plans, but nonetheless can benefit from the technical and marketing assistance.** Many of the markets made strides in adopting new best practices despite not completing formal marketing plans.

⁵⁹ To determine revenues increased, the number of farmers' markets (10) times the average sales/market day/market (\$500) times the number of market days (24) times the reported percent increase in sales (15.5%) equals the revenues increased. Ten (10) farmers' markets X \$500 average sales/market X 24 market days = 120,000 X 15.5% reported increase = \$18,600. Reduced costs or costs avoided were based on \$1,000 to develop a custom marketing plan that the markets did not have to spend as a result of the project.

- **Farmers who manage farmers' markets wear many hats, often working full-time in addition to their involvement in the markets.** Getting farmers to set aside time for workshops, technical assistance or one-on-one sessions is problematic due to the many other roles they play. One way to secure time with these farmers' market managers is to schedule sessions during the off season, though this will not completely resolve this concern.
- **Not all managers can be counted upon to share information and materials with their vendors/producers.** Future iterations of this or similar projects should consider contacting vendors directly, in addition to the market managers, or conducting presentations at the farmers' markets annual meetings where the managers and vendors are present.
- **Programs need to solicit and anticipate client needs.** It is important to ask clients their needs in terms of content, though they may not know what they don't know. One way to encourage client input is to remind them that the program is sponsored by their tax dollars and so they should want a say in how their monies are spent.
- **A less labor intensive mechanism is needed to update the printed map of farmers' markets.** Technology should be incorporated to collect updated information on farmers' markets locations, product offerings and contact information.

6.8.6 Conclusion

This was the right program at the right time. The program was initiated when consumer and supplier interest in farmers' markets was trending. The need to assist Appalachian Ohio's farmers' markets and their vendors/producers was great. The program increased the financial sustainability of these businesses, proved to be an incubator for local food production, allowed local producers to grow their small businesses, generated positive economic impacts and created jobs.

6.9 Finger Lakes ReUse Center Start-Up

The purpose of the project was to launch the Finger Lakes ReUse Center to create jobs in the deconstruction industry by disassembling housing, diverting regional assets away from local landfills, and putting regional assets such as architectural elements, building materials, and furniture back into productive reuse.

6.9.1 Community Profile

Fourteen counties in New York are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi.

In 2012, the more than 1 million residents of these 14 Appalachian New York counties realized per capita income of only \$36,749 which was about 84 percent of national, 69 percent of New York, and 100 percent of all Appalachia per capita income. Per capita

income by county, as a percent of the U.S. average, ranged from 69 percent in Allegany County to almost 89 percent in Tioga and Tompkins Counties.⁶⁰

The four Empire State counties primarily served by the program are located in the Southern Tier East Region of Appalachian New York. Three of four counties (Broome, Tioga and Tompkins), realized around 88 percent of the U.S. average in per capita income. Cortland County realized only 79 percent of U.S. average per capita income.

ARC rates each county one of five possible economic designations – distressed, at-risk, transitional, competitive or attainment - with distressed counties being the most economically endangered and attainment counties being the most prosperous. ARC defined the economic status in 2012 of all fourteen Appalachian New York counties as transitional – the middle rating.⁶¹

The Finger Lakes ReUse Center is located in the city of Ithaca, in Tompkins County. Ithaca is located approximately 225 miles northwest of New York City in the Finger Lakes region of New York. Ithaca experienced a slightly higher than state average population growth rate of 1.7 percent growth from 2010 to 2013 and is now home to approximately 30,000 people. From 2009 to 2013, 46 percent of individuals in Ithaca were living below the poverty level compared to 15 percent for all of New York State.⁶²

6.9.2 Project Description

In 2008, ARC awarded \$148,463 to Cornell Cooperative Extension of Tompkins County, a 501(c)(3) non-profit educational organization. It is part of the Cooperative Extension land grant system, a partnership between county, state and federal governments that is administrated in New York State through Cornell University. Local and state funding of \$151,981 brought the total program support to \$300,444.

The award created Finger Lakes ReUse, Inc., a non-profit 501(c)(3) organization to operate a ReUse Center and various programs to create jobs in the deconstruction industry by disassembling housing, diverting regional assets away from local landfills, and putting regional assets such as architectural elements, building materials, and furniture back into productive reuse.

Funding for the Center came from a variety of sources. ARC and matching funds each shared in the cost of funding a number of personnel for the first year of operation. Remaining ARC funds were put towards travel, supplies, and a majority of the equipment needed to initiate the operation. Future income to partially offset operating costs would be derived from sale of architectural elements salvaged from housing deconstruction performed by the Center, similar to other operations across the country. Operational income and continued support from the Solid Waste Division of Tompkins County Public Works would fund future years.

The first deconstruction project undertaken by the ReUse Center was a pilot project to remove a wood-frame cottage on the Ithaca College campus. The building was taken

⁶⁰ United States Department of Commerce, Bureau of Economic Analysis, Local Area Personal Income, 2012. Compiled by the Appalachian Regional Commission, March 2014.

⁶¹ County Economic Status Fiscal Year 2014, Appalachian Regional Commission.

⁶² State and County Quickfacts, United States Census Bureau, 2015.

apart by hand in five days. Fourteen of the 17 tons of materials were saved and either recycled or resold.

6.9.3 Project Planning and Implementation

Planning for the project began in December 2005 and Finger Lakes ReUse, Inc., was incorporated in 2007 as a 501(c)(3) nonprofit organization. The planning organizations included Tompkins County Solid Waste Management Division, Significant Elements⁶³, a non-profit architectural salvage warehouse Cooperative Extension⁶⁴, linking the research and extension efforts at Cornell University, the Cornell University Agricultural Experiment Station and the New York State Agricultural Experiment Station, provides the knowledge to maximize New York State's agricultural and natural resources. Planning proceeded from 2006 to 2008 including but not limited to an initial phase of extensive data collection by Tompkins County Chamber of Commerce and TCAD (Tompkins County Area Development), and with Best-practices adoption. A summary report⁶⁵ specified a suitably sized facility, accessible location, extended hours of operation, and proactive efforts to pick up and deliver materials would ensure maximum diversion and help provide a sustainable and community-friendly reuse operation.

Additional surveys were conducted during the planning phase to identify potential users, learn from other programs around the country and broaden the knowledge base of the staff. These included:

1. Survey of Selected U.S. Reuse Programs conducted by Kat McCarthy and Diane Cohen
2. Local Tipping Floor (RSWC) Observations conducted by Kat McCarthy and Sean Williamson
3. Locally Active Reusers Survey (local non-profits and individuals active in reuse) conducted by Diane Cohen and Jeff Klein
4. Generators Survey (Local Small Businesses) conducted by TC Chamber of Commerce
5. Generators Survey (Local Retailers) conducted by Rob Young, Cornell Cooperative Extension of TC, and Diane Cohen
6. Generators Survey (Local Manufacturers) conducted by TCAD
7. Educational Institutions Survey conducted by Diane Cohen
8. Collegetown Consumers and Generators Survey conducted by CU Certificate of Business Management students

In 2007, the program planners initiated a study of existing social and educational programs to identify potential partnerships. A five-year business plan was developed.

Finger Lakes ReUse embraced a Triple Bottom Line Mission to enhance the community, economy and environment through reuse of salvaged furniture, housewares and building

⁶³ www.significantelements.com

⁶⁴ <http://cce.cornell.edu/>

⁶⁵ A Reuse Center for Tompkins County, 2006 Surveys – Summary Report, December 8, 2006.

materials. The goals of the Center were to reduce waste and poverty, and create living-wage jobs and job training opportunities through reuse activities with a particular focus on individuals with barriers to employment.

The Finger Lakes ReUse Center, located in Ithaca opened on November 12, 2008 featuring salvaged furniture, housewares and building materials. Deconstruction services began in June 2009.

Cost and time are the two primary barriers facing the program. A deconstruction project may involve a team of three paid staff plus four volunteers for a period of two weeks or more. Thus, despite wanting to “do the right thing,” deconstruction compared to demolition may be cost prohibitive. However, deconstruction can be economically feasible for individuals in certain tax brackets where the tax write-off for donating materials makes it affordable. A knowledgeable appraiser, accurate records, a photo set and proper valuation of the re-use materials only (compared to the total value of the building) are some of the factors that are needed to document the project and satisfy the Internal Revenue Service. Typically, this is not practical for a business or university and works better for individuals. The program usually cannot make the economies work for the university where the prevailing training rate set by a trade union is in the \$10/hour range.

Given the cost of deconstruction and the positive outcomes, the program hopes in the future to initiate a state-level lobbying effort to encourage subsidies for individuals who choose to take on these projects.

Asbestos removal is another barrier. The ReUse Center must abide by the same regulations as a specialized asbestos removal contractor. Asbestos occurs in materials of all kinds which must be tested and properly eliminated. This can be a costly process. Sometimes asbestos can be handled economically and safely by “demolition in place,” whereby the materials are hosed down with liquid wetting agents while the structure is torn down.

The program was implemented with little deviation from the proposal. The administration stayed true to their vision and the response from the community was positive. Despite being located in an academic community where strong opinions on all sides of issues are common, the reuse program claims support from the full political spectrum of the community and by design has taken a markedly non-partisan path.

The program was attributed mostly to ARC funding and would have been delayed for a year or more without it. ARC funds were used to purchase all supplies used in the deconstruction process and are still in use to date.

6.9.4 Economic and Community Impacts

Deconstruction, the “unbuilding” of a structure, is emerging as an economically viable alternative to demolition that saves natural resources, reduces waste, and creates jobs. Two general categories of deconstruction or selective dismantling have emerged. Selective deconstruction (or soft-stripping/cherry picking or non-structural) precedes demolition to remove easy, high-value materials such as paneled doors, lighting fixtures, “wavy” glass windows, cabinets, chairs, appliances and some hardwood flooring. Whole

house deconstruction includes soft-stripping but also saves the structure; framing lumber, sheathing, bricks, stones, etc.

From 2009 to 2011 this program improved 75 households; 25 small to medium sized businesses; 65 organizations and 8 communities. It served 320 students and provided local revenue, generated sales taxes, made affordable access to goods, technology and services, and allowed free or low cost materials to local non-profit organizations. The Center's revenues increased \$267,000 during the grant period and one business was retained.

The ReUse Center helped build and educate the community, improving energy efficiency and transforming local liabilities (waste) into assets (jobs). The program enhanced the local workforce by creating eight living-wage jobs and retaining five positions. Individuals were afforded job skill training opportunities with marketable and specialized skills through partnerships with outside organizations, especially to underserved communities and at-risk youth.

It also provided volunteer opportunities for the community, with multiple paths for volunteers to become involved. Volunteer orientations are held monthly, staggering days and times to attract as many individuals as possible. These include senior citizens, college students, retirees, adults with disabilities, and those on public assistance required as part of their obligation to work a specific number of hours. Between five and eight of the 17 full-time staff were hired from the public assistance cohort at a given time. As of May 2014, seven trainees have secured employment and 1,080 tons of materials were diverted.⁶⁶

A substantial amount of material was diverted from the waste stream: 100 tons during the project period and an average of 150-170 tons per year since. The program claims 70 to 90 percent of materials are prevented from going to landfills, though it often takes additional labor force to accomplish this type of deconstruction compared to traditional demolition. However, tax deductions are available to those who donate materials, mitigating the additional labor expenses. The reuse program offers considerable cost savings to the community. The material-related cost impact of the 1,300 tons of materials sold in the six years to 2014 has generated \$2.3 million in used material sales and services. Disposal of this material would have cost the community \$110,000⁶⁷ and not provided the sales and services.⁶⁸

The types of materials salvaged are related to construction, computers, electronics, household goods, sporting equipment, textiles and furniture. The Center was able to protect the environment by diverting challenging materials through deconstruction, refurbishment, repair and creative reuse with a reduction in waste and emissions. It provided the community with access to affordable reusable building materials, reduced construction and demolition waste entering landfills, and created jobs and job skills training opportunities.

⁶⁶ The Community ReUse Center Model. Creating a Sustainable ReUse Infrastructure in New York State. Finger Lakes ReUse, Inc. May 19, 2014.

⁶⁷ This assumes a cost of \$85 per ton for disposal.

⁶⁸ Why ReUse? Community ReUse Centers & Building a Sustainable ReUse Infrastructure. Finger Lakes ReUse, Inc. November 18, 2014.

The program attracted additional funding – including municipal funding for waste diversion and private foundation funding for environmental preservation. By 2012, the breakdown of revenue generated was 65 percent from business income and 35 percent contributed income. One year later, the program budget exceeded \$800,000. Outcomes extending beyond the grant period include 18 jobs created (17 FTE); sales exceeded \$400,000 in 2013 (\$1.8 million to date); and service fees earned nearly \$100,000. In 2010 the organization won the Tompkins County Chamber of Commerce Not-for-Profit of the Year award.

In addition, the program helped more than a dozen people transition off public assistance into living-wage jobs. More than 65 individuals work for the organization in various weekly shifts, including 17 FTEs, plus volunteers, job trainees and federal work study students receiving financial aid.

The program has expanded since completion of ARC's program. An eCenter Computer Refurbishing operation started in April 2010 featuring refurbished computers and electronics. The Ithaca Fixers Collective began in 2012; the ReSET Job Training program in 2013.

A subsequent store location is planned for 2015 pending completion of a second environmental assessment. While the original store is located in a shopping mall, the site for the new store, which will include a lumber yard, is a highly visible location in an urban neighborhood proximate to large home supply stores. Over time, the program hopes to open additional satellite stores in underserved locations.

Sharing knowledge is a priority of the staff at Finger Lakes ReUse Center. It has applied to ARC to fund an individual to train under them in how to begin a program in another community. The Finger Lakes program currently provides technical support for communities initiating their own reuse centers and has developed templates, start-up materials and financial examples for interested programs to adopt free of charge.

6.9.5 Lessons Learned

The lessons learned are based on staff interviews, speaker presentation materials and survey results from a post-program survey conducted by an ARC contractor.

- **Program priorities may change.** As administrators recognized that for many individuals working in the program was transforming their lives, the goal of helping at-risk persons get back into the community took on increased focus. The initial goals of the program were to launch the ReUse Center, create jobs and reuse regional assets, including building materials, furniture and architectural elements. Hence, the “human experience” is now a primary goal of this effort as are helping workers gain respect and giving people second chances.
- **Multi-year funding would ease the administrative burden on staff.** The grant application process is demanding, though administrators acknowledge it makes one think analytically about a myriad of program details. Nevertheless, not having to re-apply for support each year by writing and submitting a new grant proposal could free up program administrators' time –

by eliminating tasks in the grant writing process that are sometimes viewed as repetitive and instances of “reinventing the wheel.”

Grantees realize the reluctance of agencies to fund multi-year projects in case a project encounters problems. To make sure a program stays on track, funding agencies could simply withhold funding until the program rights itself.

- **ARC funding provides affirmation which leads to increased community support.** The grant led to positive responses from the community, lifted the program and helped it realize its vision. This affirmation made it possible to leverage additional program support.
- **There is a huge, untapped need for additional deconstruction programs.** There are massive quantities of materials that can be reused but end up in the landfill. Despite this small program being considered a leader in the field, for reasons of cost and time it is unlikely to service an area more than one hour away.
- **Location of the reuse center is key.** A highly visible location in a high traffic area will further sales of reusable materials. When customers can see the center and its wares from the road, particularly when the road is located nearby or on the way to other retail home center stores, the volume of reuse sales will improve significantly.
- **Success components at program origination include:**
 - Determining business structure
 - Identifying stakeholders
 - Developing sufficient support
 - The importance of partnerships
 - Identifying the board of directors
 - Developing a business plan
 - Site location
 - Inventory management and point-of-sale systems
 - Minimizing overhead

6.9.6 Conclusion

The Finger Lakes ReUse Center was able to protect the environment by diverting challenging materials through deconstruction, refurbishment, repair and creative reuse with a reduction in waste and emissions. It provided community with access to affordable reusable building materials, reduced construction and demolition waste entering landfills, and created jobs and job skills training opportunities. The ReUse Center seeks to become a stepping stone to make these programs viable and available to other communities.

6.10 Expanding Entrepreneurship in Appalachia – REAL Entrepreneurship Curriculum Improvement

The North Carolina Rural Entrepreneurship through Action Learning (NC REAL) provides experiential entrepreneurship education for schools, community colleges, and adult entrepreneurship programs, and is adaptable to other contexts. This grant allowed the NC REAL to update and modernize its entrepreneurship curricula, encourage additional individuals to use the REAL curricula and provide training scholarships as needed. The REAL Entrepreneurship curriculum is now a subsidiary of Sequoyah Fund, a community development finance institution, which purchased it from NC REAL in 2015. This project is classified as a Business/Training project and the case study refers to grant funding in FY 2007.

ARC awarded a grant of \$82,600 in 2007 to NC REAL, which helped to secure additional local funding of \$107,750 and state funds of \$15,000 bringing total funding to \$205,350.

6.10.1 Community Profile

Twenty-nine counties in North Carolina are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi.

In 2012, the population of Appalachian North Carolina approximated 1.7 million residents. Their per capita income was \$34,215, lower than all of the comparison regions. The per capita income was about 78 percent of the national average, 90 percent of state average and 95 percent of the entire Appalachian region average. Per capita income by county ranged from a low of 62 percent of the U.S. average in Graham County to a high of 92 percent in Polk County.⁶⁹

Appalachian North Carolina experienced a 2012 unemployment rate of 9.4 percent, almost equal to the entire state (9.5 percent). The rate in Appalachian North Carolina exceeded both the U.S. rate and the rate for entire Appalachian region, both at 8.1 percent. Sixteen of the 29 Appalachian counties in North Carolina experienced unemployment rates in double digits, the most severe in Graham County (16.8 percent).

The 17.9 percent poverty rate experienced by residents of Appalachian North Carolina from 2008 to 2012 exceeded the national rate by three percentage points. Only four of the counties fell below the poverty rate for the U.S. The county with the most severe rate of poverty among the state's Appalachian counties, 28.8 percent or almost twice the national poverty rate, occurred in Watauga County.⁷⁰

ARC defines the economic status of each county with one of five possible designations based primarily on three indicators: three-year average unemployment rate, market income per capita, and poverty rate. The five economic status designations are: distressed, at-risk, transitional, competitive, and attainment. "Distressed" counties are the most economically depressed and "attainment" counties are the most prosperous. In FY

⁶⁹ United States Department of Commerce, Bureau of Economic Analysis, Local Area Personal Income, 2012. Compiled by the Appalachian Regional Commission, February 2014.

⁷⁰ Unemployment Rates, 2012; Poverty Rates, 2008-2012. Appalachian North Carolina United States Department of Commerce, Bureau of Economic Analysis. Compiled by the Appalachian Regional Commission, February 2014.

2012, ARC defined the economic status of all twenty nine counties in Appalachian North Carolina as distressed, at-risk, or transitional, the three lowest status designations.⁷¹

6.10.2 Project Description

The North Carolina Rural Entrepreneurship through Action Learning (NC REAL) was a relatively small training program based in Raleigh, which used action learning to expand entrepreneurship in Appalachian North Carolina and across the state. The staff of three trainers from NC REAL taught their clients using a “train the trainers” model; training instructors and educators who, in turn, would be teaching the REAL curriculum to students and entrepreneurs in their schools, institutions and local communities. The REAL program encourages development of sustainable enterprises by helping individuals develop the skills required for successful business ventures.

Though this case study focuses on program enhancements made during the Appalachian North Carolina phase of the program, the REAL program curricula is taught in 43 states and foreign countries, hundreds of high schools, post-secondary schools, community and online-based programs. More than 400 elementary and middle school facilitators also use REAL curricula.⁷² In order for an institution to offer REAL training, its instructors must have successfully completed the training, be certified by the REAL program and own a copy of the curriculum.

The FY 2007 ARC grant funding allowed NC REAL to undertake a periodic update and modernization of its curricula, expand trainer education and grow its entrepreneurship education programs. The curriculum revision replaced out-of-date references (such as obsolete references to video cassette tapes) in the 20-year-old coursework, integrated modern online tools and technologies and brought in contemporary electronic enhancements. The update also added additional financial literacy to the coursework and enhanced information about emerging industry clusters. ARC funding laid the groundwork for current specialized curricula offerings (in subject areas such as agriculture, healthcare and craft artistry), and expansion into new communities. In addition, 40 new teachers from the Appalachian region were trained at REAL Summer Institutes, with scholarship support provided as needed. In general, ARC support underwrote costs of personnel, supplies, contract support, and training scholarships.

The following is a description of the curriculum as stated on an archived website from the REAL program from around the time of ARC's grant:

The REAL Entrepreneurship curriculum consists of a printed guide of core activities and a USB Flash Drive with supplemental activities and resources designed for those setting up hands on REAL Entrepreneurship programs in their schools or community organizations. The curriculum includes group and individual activities business planning journals an integrated technology component and a course and program planning section. Note The curriculum is licensed only to teachers who attend a REAL Entrepreneurship Institute.⁷³

⁷¹ County Economic Status Fiscal Year 2012. Appalachian Regional Commission.

⁷² About REAL, http://ncreal.org/what_is_real

⁷³ http://ncreal.org/our_programs (2014-02-24)

6.10.3 Project Planning and Implementation

With special emphasis on rural communities in North Carolina, NC REAL's mission was to develop entrepreneurial talent through hands-on education and to advance the formation of sustainable enterprises. A key goal of the program, which began in 1985, was to encourage more individuals in Western North Carolina to teach using the REAL curricula, including instructors at community colleges and high school organization facilitators. NC REAL used a train-the-trainer model, allowing three REAL trainers to offer 12 to 15 full-week training sessions across the state. The curriculum was adaptable to community-based organizations, including those assisting Hispanic and Native American populations, and to current or potential entrepreneurs.⁷⁴

At its core, REAL was designed to teach potential entrepreneurs the ins-and-outs of running a small business. REAL offered experiential education to a wide range of audiences, spanning from students and youth in elementary and middle schools, to post-secondary students and adults. By teaching their teachers in the REAL curriculum, for example, students in turn, become able to implement school-based enterprises and small businesses in their home communities. One primary goal of the REAL entrepreneurship curricula was for students to develop feasible business plans through which they could assess their entrepreneurial potential and research, plan, set-up and operate businesses of their own design.

Scholarships were often available to instructors who met program qualifications and developed plans describing how they would use their training to train others. Employers usually picked up the tab for those without scholarship support. In fact, many educational institutions required faculty to attend the REAL courses as a regular part of their professional development, especially new hires. Instructors who successfully completed the program earned their certification in the REAL curricula and continuing education units (CEUs), if appropriate.

Though ARC grant funding focused on the in-state program, the REAL program is now taught in 43 states and foreign countries. NC REAL was responsible for developing the original entrepreneurship curricula, which was adopted by at least two other states. Over time, these other states dropped by the wayside, and by 2007, the period covered by this grant cycle, NC REAL had secured all rights to the entrepreneurial training program. Currently all institutions, domestic and foreign, must purchase the curricula from NC REAL.⁷⁵

NC REAL was able to identify potential trainers through its community relationships with small business centers, community colleges and high schools, and follow-up with former instructors. Additional sources were utilized to identify potential instructors for the program's more recent specialty curricula development. For example, personnel were identified to teach the REAL agricultural curricula through cooperative extension programs (supported by the United States Department of Agriculture), county agencies and/or councils of government. Crafts persons and artists to teach the program coursework designed for artists were identified through art and economic development groups at community colleges. With few exceptions, most participants resided in-state.

⁷⁴ How does REAL Work? http://ncreal.org/what_is_real/how_real_works_cfed

⁷⁵ See introduction concerning sale of the program in 2015.

NC REAL officials acknowledge this program would not have taken place without ARC funding. By facilitating the curriculum update, the grant laid the groundwork for the subsequent REAL Agricultural Entrepreneurship Curriculum funded across the state and other curricula designed for new targeted populations as described above. Leveraged funding from Z. Smith Reynolds supported a strategic planning project to assist NC REAL determine its next five years.⁷⁶

6.10.4 Economic and Community Impacts

Since the onset of the NC REAL program in 1985, more than 12,000 entrepreneurs have received intensive training and more than 500 North Carolina high school, post-secondary and community-based organization educators and administrators have participated. NC REAL offers its experiential education and professional development courses as seminars and week-long institutes. More than 1,500 entrepreneurs, bankers, accountants, and other professionals have provided assistance to NC REAL's participants and graduates. The program creates 2.5 jobs per REAL business start-up, generating \$3 million in sales per month across the state.⁷⁷ The REAL program is taught in 43 states and foreign countries. The modules are available to community colleges, small business centers, and community development centers statewide. The program website provides course registration information and workbooks for purchase.⁷⁸

During ARC's funding period, from 2008 to 2011, 18 organizations, 24 communities and 5,000 students were served. More than 250 instructors were trained in REAL Entrepreneurship. Eighteen organizations and 28 communities were improved and more than 150 courses were offered in North Carolina alone. These results are based on reports of REAL instructors from across the region, contacted two times a year. However, program administrators note that since REAL offers the coursework to the trainers, rather than directly to the individuals who will be using it directly in the community, data on the number of businesses created or enhanced is anecdotal and may not be comprehensive.

NC REAL does, however, track directly the courses offered and student enrollments. NC REAL entrepreneurial training programs have created thousands of new jobs across the state through its training programs and curricula. It has also fostered networking among business owners who have taken the course.

ARC funding assisted NC REAL to offer new, expanded specialized entrepreneurial curricula for craft/artists, agricultural/farmers and healthcare workers. In some cases, the NC REAL program was approached to find out if it could assist special populations, such as laid off agricultural workers. In this case, staff recognized the specialized needs of this population, so rather than tweaking the curricula, NC REAL developed a new set of courses specifically designed to address their unique situation. In this manner the program evolved and was able to reach partners and train new groups of individuals not served previously.

⁷⁶ NC REAL reports in 2012 that a \$35,000 grant from Z. Smith Reynolds Foundation complements a previous \$28,000 commitment by the Foundation to strategically plan for the future.
<http://archive.constantcontact.com/fs031/1109430909585/archive/1110008793236.html>

⁷⁷ About REAL. http://ncreal.org/what_is_real

⁷⁸ <http://www.entrekeys.com/>

The updated curriculum and instructor training allowed additional community colleges to offer an entrepreneurship course and increased the variety of courses offered. The program provided comprehensive professional development program for instructors (in-service seminars, site visits); experiential, activity-based entrepreneurship curricula; course materials; evaluation and documentation strategies; and school-based module/training. It is currently taught in every community college in Western North Carolina.

In a post-program interview, grant officials noted a program obstacle - reluctance among facilitators to employ the program's evaluation system. This made it problematic to conduct a proper appraisal of the NC REAL grant program. The inability to track progress against program goals was disappointing to NC REAL officials, despite recognition that ARC valued the use of concrete measures to gauge success. Despite revamping its evaluation system, the low response rates prohibited the grantee from proper evaluation of the program.

Another issue cited by program staff was limited success in getting communities to support what they called a "culture of entrepreneurship." One way the NC REAL encouraged this mentality was to ask trainees to discuss what was missing from their communities and address how entrepreneurs could resolve these deficiencies. For example, participants were asked to contemplate why their community was overly dependent on tourism and to try to come up with entrepreneurial approaches the community could leverage to meet the challenge.

The grant met its primary goals of updating and modernizing the REAL curriculum and expanding the REAL program to new and increasing partners in Appalachian NC. A less-vital goal, to strengthen groups of partners, was deemed somewhat less successful by the grantee. For example, program administrators described how turnout for training at an Alabama site turned out to be less than anticipated. Here the eventual outcomes were characterized as modest, limited to a church-sponsored cookbook, a program fundraising event and the experience of attending the program.

Nevertheless, ARC funding allowed the NC REAL to grow as an organization and expand its reach. NC REAL evolved as a viable entrepreneurial education model program, modernizing its training curriculum and working in multiple states and countries. The program was able to develop new focus areas with new partners such as agriculture, healthcare and craft artistry. The results were more than 12,000 entrepreneurs gaining intensive training and the participation of hundreds of educators and administrators experiencing the REAL entrepreneurial training program.

6.10.5 Lessons Learned

The lessons learned are drawn from interviews of program administrators and survey responses from a post-program questionnaire conducted by an ARC contractor.

- **Securing partnerships at program outset is essential.** Support from partners, often considered a mere formality, should be taken seriously beginning with the proposal stage of a program. Letters of support from partners enhance credibility allowing outreach to additional local and regional communities, and particularly communities that can provide specialized expertise needed for the success of the current program or future programs.

- **Routine updates can foreshadow unforeseen opportunities to evolve and serve new partners.** Bringing the curriculum up-to-date to include newer technologies and subject matter ensured it could be quickly modified later on. This allowed the program to reach new communities, including healthcare workers, farmers and craft persons/artists.
- **Consider how to track data early in the process.** It is important to inform participants that providing follow-up tracking data is expected. Consensus on measurements and processes can boost response rates during the evaluation phase of a program.

6.10.6 Conclusion

NC REAL's mission to provide timely, relevant entrepreneurship education was advanced by updating the REAL Curriculum. This revision allowed expansion into new communities and made possible the development of specialized curricula. At the time of this grant, the NC REAL program was at a crossroads. It had to update and modernize its REAL Curriculum to stay relevant. ARC funding made this possible and allowed REAL to expand its offerings and expand its training of new facilitators. ARC funding was the impetus that got the organization moving to where it is now; an evolving program positioned for the future. The skill levels of the workforce, the viability of local business and access to local markets were improved as a result of this program.

6.11 Northeastern Pennsylvania Alliance Enterprise Development

In 2010, ARC awarded a \$400,000 business development grant for technical assistance to the Northeastern Pennsylvania Alliance to continue to serve area businesses and industries with small business financing, international business development assistance, procurement technical assistance, e-commerce activities and its network of service providers.

6.11.1 Community Profile

In 2012, almost 6 million Pennsylvania residents (45 percent) lived in the state's 52 Appalachian counties. Seven of these counties – Carbon, Lackawanna, Luzerne, Monroe, Pike, Schuylkill, and Wayne – comprise the Northeast Pennsylvania Local Development District (LDD). LDDs assist counties by strengthening local partnerships, addressing common issues and responding to critical concerns.⁷⁹ Almost 18 percent of residents of Appalachian Pennsylvania lived in the seven counties served by the Northeast PA Development District (NEPA).

Fifty-two counties in Pennsylvania are served by LDDs, multi-county organizations providing services in such areas as community and economic development, transportation, international trade, strategic planning and much more. Counties share information through their LDD, respond to common concerns, and develop solutions to today's critical issues. For over 40 years Pennsylvania's LDDs have taken the lead in

⁷⁹ www.nepa-alliance.org/about/local-development-districts-ldd-history

community and business initiatives, coordinating and delivering services on behalf of their member counties as well as the Commonwealth. NEPA is the local LDD for ARC in Northeastern Pennsylvania. All seven LDDs are designated by ARC.

In 2012, the residents of Appalachian Pennsylvania realized only about 91 percent of the average per capita income of the entire state. However, Pennsylvanians in general, and those in Appalachian Pennsylvania, fared slightly better than their comparison cohorts in terms of average per capita income. The average per capita income for the state of Pennsylvania slightly exceeded that of the U.S. (103.1 percent). Similarly, the average per capita income in Appalachian Pennsylvania exceeded that of the entire Appalachian region (\$41,082 to \$35,849).

In contrast, six of the seven counties in the NEPA service region fell below the average per capita income of Appalachian Pennsylvania. Of the seven counties in the NEPA service region, only Lackawanna County realized higher average per capita income than the overall average of Appalachian Pennsylvania. The average unemployment rate for the Appalachian Pennsylvania counties in 2012 matched that of the Appalachian Region (7.9 percent). Of the seven NEPA counties, only one, Wayne County, had an unemployment rate below that of the average for all Pennsylvanian Appalachian counties.

ARC defines the economic status of each county with one of five possible economic designations based primarily on three indicators: three year average unemployment rate, market income per capita, and poverty rate. The statuses are distressed, at-risk, transitional, competitive or attainment. Distressed counties are the most economically endangered and attainment counties are the most prosperous. Of the 52 counties of Appalachian Pennsylvania, all but nine were designated transitional, the middle rating. Of the remaining nine counties, seven were designated as competitive, and one each was distressed or at-risk. ARC rated all seven counties in the NEPA region as transitional.⁸⁰

6.11.2 Project Description

The project allowed Enterprise Development Programs to assist local businesses, community based organizations, local and county governments and not-for-profit organizations. According to program officials, clients were small businesses with fewer than 100 workers, and in fact, most had fewer than 50 employees.

The program provided technical and marketing assistance in three core areas:

1. Government Procurement Assistance
2. Business Finance Assistance
3. Export Marketing Assistance

Government Procurement Assistance

The program brings buyers together with Pennsylvania suppliers of services and products through its PA SourceNet. This system aims to maintain the network based on high quality reliable information. Data are reviewed by a qualified marketing specialist

⁸⁰ County Economic Status, Fiscal Year 2012, Appalachian Pennsylvania.
http://www.arc.gov/reports/region_report.asp?FIPS=42999&REPORT_ID=37

and accuracy is verified prior to enrollment. More recently, the program was expanded to link state companies with prequalified international trade leads.

The program helps small businesses sell products and services to federal, state or local government agencies through NEPA's Procurement Technical Assistance Center (PTAC). It also assists companies who wish to bid on federal contracts and helps government agencies locate local regional suppliers.

Business Finance Assistance

NEPA's Business Finance Sector provides direct loans to eligible underfinanced small businesses, from a wide range of eligible sectors, with expectations that jobs will be created or retained. The finances help pave the way for these businesses to secure additional investment from banks and other sources of private and public funding. The loans feature low, fixed interest rates, lower down payments and standard loan term maturities. NEPA also makes available microloans for business start-ups, small businesses and entrepreneurs.

Export Marketing Assistance

NEPA is a primary point of contact for regional businesses engaged in international trade. It provides information on the benefits of international trade and international business advice to new and experienced exporters to grow sales and expand markets.

Other Services

As the LDD, NEPA develops maps and datasets using the latest geographic information system (GIS) technology. The data are used for planning, resource management, infrastructure analysis, emergency response and site selection. Additional community-economic development support services include rail line retention, entrepreneurship development programs (EDP), modeling to identify business opportunities, and regional events, among many other services.

NEPA is a 501(c)(4) not-for-profit organization directed by the following entities:

- Volunteer Board of Directors
- Local government and county officials
- Other not-for-profit executives
- Development organizations
- Private industry individuals

The \$400,000 funding in 2010 from ARC was used for operational expenses. According to the program director, additional sources of funds included the U.S. Economic Development Administration and various state funding agencies. Additional state, federal and local support brought total funding to \$800,000.

6.11.3 Project Planning and Implementation

The Northeast PA Alliance Enterprise (NEPA) was founded in 1964 to serve the seven counties on Northeastern Pennsylvania. NEPA was a non-profit, private, regional

community and economic development agency providing services in business financing, government contracting assistance, international trade assistance, non-profit assistance, transportation planning, research and information, and local government service. ARC funding began in 1981-1982. At that time, the program was comprised of a financial component only. These initial funds were used for staffing and staff training opportunities.⁸¹ According to the program director, as the program expanded subsequent funding was used for more general operating expenses.

Pennsylvania's economy was slowing by the mid-1990s and business leaders sought to influence the Commonwealth's direction in the world economy. Team Pennsylvania (Team PA) was launched as an idea in 1997 allowing government and industry leaders to work together in the state's job growth and business climate and collaborate with like organizations to ensure the Commonwealth's economic development.⁸² The Northeastern Region of the state's economy solidly relied on small business, concentrated in the services, retail trade and manufacturing sectors. From 1998-2007 employment in the manufacturing sector fell 26.0 percent.⁸³

When ARC was slated for cutbacks and eventually for elimination by the Reagan Administration in the early 1980s, leading to cutbacks in funding, Pennsylvania developed a series of reports entitled "Choices for Pennsylvanians." They focused on job generation and assisting small businesses with recommendations in a half-dozen key areas (including small business finance, new business incubation, assistance to entrepreneurs, and others) and concentration on special areas called Enterprise Zones. In Pennsylvania, factors driving the designation of Enterprise Zones included high unemployment rates, persistent poverty and blight, deficient infrastructure, closures of major plants, and poor business climate, among others.⁸⁴

The current program, according to program officials, was based on the framework developed by Walter Plosila, at the time a former deputy secretary in the Pennsylvania Department of Commerce and Director of the Governor's Office of Planning. He was a pioneer in the development of business incubators, which began around 1964 but did not take off until the early 1980s.⁸⁵

As the LDD for the region, it could focus on programs deemed most important to the area. Initially, the Northeast PA Alliance only could support a finance program and funds to hire and train staff.

6.11.4 Economic and Community Impacts

The following outputs were reported to ARC. The grantee expected the program would generate 200 new jobs. It created 169 positions. About 585 jobs were predicted for retention. It retained 640 jobs. The program expected to realize \$4 million in leveraged

⁸¹ <http://www.nepa-alliance.org/about/mission/>

⁸² <http://teampa.com/about>

⁸³ Northeastern Pennsylvania Enterprise Development Program Report – Chapter 1: Project Summary.

⁸⁴ Wong, Sidney. Local Enterprise Zone Programs and Economic Development Planning: A Case Study of California and Four Mid-Atlantic States, 1996. Pennsylvania Institute for Urban Research collection.

⁸⁵ Petrucci, J. Evolving Innovation: Research Parks as the Next Generation of Business Incubators. Keystone Edge, July 9, 2009.

private investment though none was reported to ARC for this particular reporting period. However, information obtained from the grantee directly indicates the program exceeded expectations, leveraging more than \$5.4 million from the private sector from October 2009 through September 2010.⁸⁶

According to ARC data, during the previous full grant year, the grantee made 14 loans totaling \$1.49 million, leveraging \$6.5 million in private funds and served 220 companies in its technical assistance programs. As a result of the grantee's assistance, area companies experienced a \$23 million increase in government procurement contracts. The total reported job impact was 365 jobs created and 740 jobs retained.

6.11.5 Lessons Learned

Lessons learned were gleaned from interviews of program administrators.

- **Hire the correct type of staff.** While this advice is applicable to many types of programs, it applies especially to finance-related programs. Program officials recommend that when hiring, seek individuals who are able to adapt and learn, and can function in different situations. It is also important to pay them what they are worth.
- **Temper expectations.** Do not set expectations too high at the beginning of a program. Outputs take time to develop and reach potentials.
- **Develop outcomes that can be documented.** It is important to be able to capture and document outcomes to report back to funding agencies. Jobs, new sales and new markets are good examples of metrics that can prove a good investment to program funders and hopefully convince them to increase funding in the future. The ability to document private investment and subsequent jobs helps prove a program's worth and illustrate to stakeholders the program's accomplishments.

6.11.6 Conclusion

The Northeastern Pennsylvania Alliance program (NEPA) continues to provide business finance services, a procurement outreach program for companies interested in marketing their products or services to the federal, state and/or local governments and an international trade program to small businesses in the seven NEPA service counties of Northeastern Pennsylvania. In addition, it offers a geographic information system (GIS) program, information services, education and training, and entrepreneurial initiatives, all supported by ARC funds.

The program has generated thousands of jobs since its inception and millions of dollars in leveraged private funds. Though this case study report focuses on one year of funding, the program's longevity and outcomes are testaments to the its success.

⁸⁶ ARC changed the reporting timeframe in 2010. Some measures may cover only 9 months ending 6/30/2010.

6.12 Building the Clean Energy Economy in Western North Carolina

In 2010, ARC awarded a \$100,000 business development grant to Land-of-Sky Regional Council, a multi-county local planning and development organization in Western North Carolina. Additional federal and state funds doubled the total to \$200,000. ARC support underwrote personnel, indirect costs, travel, supplies and contractual expenses.

The purpose of the project was to initiate activities to support the growth of a clean energy economy in the western region of the state. Actions included development of a website to network clean energy businesses, hosting training sessions for local area businesses and residents on clean and renewable energy, developing strategic energy plans for local governments and forming a regional leadership group to guide clean energy efforts and identify regional branding opportunities.

6.12.1 Community Profile

Twenty-nine counties in North Carolina are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi.

The 2012 population of Appalachian North Carolina was about 1.7 million residents. Their average per capita income was only \$34,215, about 78 percent of national, 90 percent of state and 95 percent of all Appalachia in per capita income. Average per capita income by Appalachian North Carolina County ranged from 62 percent of the U.S. average in Graham County to 92 percent in Polk County.⁸⁷

Joblessness and poverty were significant issues in the region. The unemployment rate in Appalachian North Carolina in 2012 was 9.4 percent, about equal to the state (9.5 percent), compared to 8.1 percent for both the U.S. and the entire Appalachia region. Sixteen of 29 Appalachian counties in the state experienced double digit unemployment rates, the most severe in Graham County (16.8 percent). The 17.9 percent poverty rate in the region, from 2008 to 2012, was three percentage points above the national rate (14.9 percent). Only four counties fell below the national average. The most severe poverty rate among Appalachian North Carolina counties in occurred in Watauga County (28.8 percent); a rate almost twice that of the entire U.S.⁸⁸

ARC defines the economic status of each county with one of five possible economic designations based primarily on three indicators: three year average unemployment rate, market income per capita, and poverty rate. The statuses are distressed, at-risk, transitional, competitive or attainment. Distressed counties are the most economically endangered and attainment counties are the most prosperous. ARC defines the economic status of all of these twenty nine Appalachian counties in North Carolina as at-

⁸⁷ United States Department of Commerce, Bureau of Economic Analysis, Local area Personal Income, 2012. Compiled by the Appalachian Regional Commission, February 2014.

⁸⁸ Unemployment Rates, 2012; Poverty Rates, 2008-2012. Appalachian North Carolina, United States Department of Commerce, Bureau of Economic analysis. Compiled by the Appalachian Regional Commission, February 2014.

risk, distressed or transitional. None of the counties in the region received the higher economic status of competitive or attainment.⁸⁹

6.12.2 Project Description

Land-of-Sky Regional Council (LOSRC) is a multi-county, local government planning and development organization in Western North Carolina. There are 16 regional councils in North Carolina. Regional councils are volunteer associations of local governments taking on many of the decision making, planning, management and technical services to local governments which are best addressed on a regional level.⁹⁰ Regional Councils are regarded as local governments without taxing or police authority

LOSRC initiated the Building Clean Energy Economy in Western North Carolina project in 2009 to promote clean energy and entrepreneurship in the region. The project supported partners with information, expertise and implementation tools to develop the clean energy economy in the 31 counties of Western North Carolina (WNC). Support included regional leadership, technical assistance and development services for local governments and communities. An important step was the development of an interactive website to support regional networking, assisting local governments in planning and with knowledge, branding, marketing, and business outreach. The program incorporated collection and analysis of data, and establishing a leadership group of high-level stakeholders. Regional partners included: AdvantageWest, Blue Ridge Entrepreneurial Council, AB Tech, Blue Ridge Community College, and the six Western North Carolina Councils of Government. ARC funds were judged as critical to the program, with administrators acknowledging that the program would not have existed without ARC support.

Given the significant economic challenges of the region, a key priority was job creation via development of alternative fuels and green energy initiatives. The instability of the traditional fuel industry together with an aging energy infrastructure, rising energy costs, growing joblessness, falling wages and the loss of manufacturing and construction sector jobs were all contributing to hardships in the region. Moving towards a clean energy economy was seen as an important step in resolving these circumstances.

6.12.3 Project Planning and Implementation

The evolving atmosphere of clean energy, emerging clean energy techniques and economies, and growing environmental awareness encouraged development of this program. It was conceived by the region's Comprehensive Economic Development Strategy to foster clean energy planning and entrepreneurship and aligned with the priorities of regional planners seeking a means to establish clean energy businesses in Western North Carolina, broaden present ventures and provide guidance. The program filled this void by providing leadership, planning mechanisms, entrepreneurial proficiency and an overarching structure to move these efforts forward.

⁸⁹ County Economic Status Fiscal Year 2012, Appalachian Regional Commission.

⁹⁰ Land-of-Sky.org. Frequently Asked Questions.

Heretofore, the grantee, Land-of-Sky Regional Council (LOSRC), had worked on a campaign to develop clean energy, clean air and clean vehicles. LOSRC and the regional economic development corporation AdvantageWest developed the 31 county clean energy initiatives to include all six regional councils of government in the district and economic development partners. Prior to ARC's grant, partial funding was obtained from the U.S. Department of Commerce, Economic Development Administration allowing some partners to start early and actively move forward on this vision for more than a year. This early funding allowed project partners to refine the vision, establish roles and prioritize project activities.⁹¹

An administrative body was required to guide the effort. To establish this Leadership Group, the Project Advisory Group vetted an initial list of more than 70 individuals. It agreed on a final list of 32 participants from diverse industry backgrounds and geographic areas, after networking the candidates and meeting with a number of stakeholder groups. Participants came from diverse segments of the communities. They included business, service providers, local governments and councils of governments, education and workforce development, nonprofit businesses, public and private business developers, recruiters and marketing experts and utilities, among others. The Advisory Group developed a vision and roles for the Leadership Group. Figure 18 shows the structure of the Leadership Group and Clean Energy Network for this project.

The Leadership Group provided expertise, guidance and materials for marketing plans, branding programs, strategies for economic development, and workforce and infrastructure expansion. Composed of multiple partners, they sought to raise awareness about the importance of clean energy policy issues, grow local jobs and businesses, and garner support for the WNC clean energy sector. Their stated purpose was, "to create a unified umbrella of leadership, strategy and promotion of WNC's clean energy economy."⁹²

The structure and focus of the Leadership Group was refined during the grant period. Its role morphed from primarily advisory to a more action-oriented body. Preserving dollars generated by clean energy within the WNC region was a program priority. To this end the Leadership Group focused on "internal recruitment" – growing local businesses while also working to draw industries to the region to bolster the clean energy cluster.⁹³

Central to the program was the development of a Web 2.0 platform; networking the cluster of clean energy businesses, supporting blogs and business profiles, facilitating social networking and communicating updated content. As the program developed over the course of the grant, the content of the Web 2.0 portal, AdvantageGreenNetwork.org, expanded and its memberships increased.

The EvolveEnergy Partnership was developed during the grant period to foster innovation, financing, policy and workforce tools. It supports expansion of existing clean

⁹¹ Land of Sky Regional Council. Progress Report Quarter 1. Building the Clean Energy Economy in Western North Carolina. July 30, 2010.

⁹² Progress Report Quarter 1, July 30, 2010.

⁹³ Ibid.

energy businesses, creation of new ventures and clean energy commercialization and partnerships among the cluster of clean energy businesses.⁹⁴

6.12.4 Economic and Community Impacts

The Building the Clean Energy Economy in Western North Carolina program brought together individuals, businesses and groups that would be unlikely to collaborate had this program not existed. The high-level staff and regional leaders on the Leadership Group encompassed diverse geographic and industry backgrounds. Success of the program hinged on connections made possible by ARC's grant.

As a result of the program, new to the region businesses, such as Sierra Nevada Brewing Company and other like-minded companies who share the clean energy philosophy, were recruited. Like Sierra Nevada Brewing, some enterprises were related to the craft beer and cider brewing industry, while others represented philosophically-similar businesses, such as outdoor gear manufacturing and those involved in additional areas of outdoor recreation. The number of clean energy businesses involved in the program expanded and grew. New and existing businesses involved in the clean energy sector became strong constituents of the local economy.

The Web 2.0 platform fostered networking among the clean energy business cluster, expanding to include the 31-county region. The platform incorporated active blogs, profiles of businesses, social networking, and quarterly updates. By the third quarter of funding, unique visits were up 94 percent, memberships had more than doubled, and email newsletters, blog posts and news articles related to clean energy were increasingly posted.⁹⁵ Networking facilitated by the web platform assisted businesses finding resources in siting, working capital, marketing networks and additional services to spread the word out about their products and get their goods to market. It also broadcast rules and regulations pertaining to clean energy and renewables.

The EvolveEnergy Partnership, an initiative of business and community leaders to make WNC a model of economic and environmental success through support of clean energy innovation and industry development, formally launched in 2011. It can trace its roots to the planning, framework, strategic initiatives, research studies and branding resulting from this grant. Uniting the regional partners, it is responsible for creating more than 250 jobs, securing more than \$5.5 million in investment, supporting nine new clean energy startups, training more than 625 professionals, and generating in excess of \$56,000 in ad value and \$280,000 in public relations value for Western North Carolina's clean energy economy.⁹⁶

The Building the Clean Energy Economy in Western North Carolina program came together around a common vision, developed strategies and created a unified brand. It developed outreach to businesses and individuals committed to the clean energy economy, and supported recruitment and tactics. The program fostered business networking forums, and encouraged attendance and sponsored events for site consultants. Program funds supported lead generation meetings and outreach, training

⁹⁴ <http://evolveenergyp.com/about-the-project/history-accomplishments/>

⁹⁵ Progress Report Quarter 3, January 31, 2011.

⁹⁶ <http://evolveenergyp.com/about-the-project/history-accomplishments/>

seminars and outreach to media, including newsletters, blog postings, fact sheets and surveys. They produced applications for recruiting fellows and interns. Grant funds were used to subsidize presentations at professional meetings and develop tracks of interest in related subject areas. The program supported resource directories, grant tools for green projects, continuing education seminars and business training. It delivered business support services through incubation, at times in conjunction with local colleges.

The program planned to create nine jobs, a goal accomplished by the end of the grant period. It also predicted the creation of three new businesses. However, at program completion, it generated 173 new businesses. The program served 134 businesses, 38 organizations and 31 communities.

At the end of Phase I of the program in 2011, Western North Carolina had the highest concentration of clean energy companies in the state with more than 475 businesses; a clean energy company in every WNC county; and annual industry growth rates significantly outpacing state and national averages, among other measures of success.⁹⁷

6.12.5 Lessons Learned

The lessons learned are drawn from interviews of program administrators, survey responses from a post-program questionnaire conducted by an ARC contractor, online information and report documents, such as progress reports.

- **Resist over-scaling the program.** The very broad scope of the program was an issue the grantee faced from the onset of the project. This program covered a large geographic area with varying needs and concerns. Regional participation and demand varied, resulting in mixed levels of support for the program. The grantee suggests the program administration and outcomes might have benefited from a more compact scale combined with a more defined program focus.
- **Develop a long term strategy.** Program leaders did not anticipate how the program would fare or if it could continue to exist when the outside funding expired. According to program officials, toward the end of the program, administrators struggled over whether the program could survive without grant funding. In the end, it did not. AdvantageWest was scheduled to close at the end of summer 2015.

6.12.6 Conclusion

The Building the Clean Energy Economy in Western North Carolina grant created connections among like-minded companies who shared the mindset of a clean energy economy in Western North Carolina. These businesses shared values of conservation, healthy economy, and quality of place. The program facilitated the relocation of new companies and service providers to the region who shared these values.

The success of the program lies in creating a foundation that remains in place today, though the program itself may no longer be up and running. That may be acceptable in

⁹⁷ Building the Clean Energy Economy in Western North Carolina Phase I Final Report, Land-of-Sky Regional Council, 2012.

the life-cycle of the organization. The enduring legacy of the program is that it has become mainstream and is incorporated into the culture of the region.

6.13 West Virginia High Technology Consortium Foundation INNOVA Commercialization Technical Assistance

This project allowed the West Virginia High Technology Consortium (WVHTC) to expand its activities in order to accelerate product commercialization by continuing support for an early-stage investment fund, and linking this new source of capital to a range of technical assistance efforts. The INNOVA Commercialization Group (INNOVA) investment fund made small investments (under \$100,000) in companies with new technologies that required additional market research and commercial testing. INNOVA also partnered with public and private sector technical assistance organizations to help bring these new technologies to market.

In 2005, ARC awarded a Business/Training related grant of \$125,000 to WVHTC to support early-stage investment and technical assistance to high-technology start-up small businesses in West Virginia. Additional funds brought the total funding to \$250,000.

6.13.1 Community Profile

All fifty-five counties in the state of West Virginia are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi.

The 2012 population of West Virginia (and therefore the Appalachian region of the state) was just over 1.86 million residents who realized average per capita income of \$35,082, about 80.2 percent of the U.S. average, and just below the average for the entire Appalachian region (98 percent). Per capita income ranged from a low of \$22,412 in Doddridge County to a high of \$44,660 in Kanawha County, or just over half (51.2 percent) to approximately twice (102.1 percent) the U.S. average, respectively.

The 2012 unemployment rate for the state (and therefore Appalachian region of the state) at 7.2 percent was slightly better, that is lower, than the 8.1 percent both for the U.S. and the combined Appalachian region. Clay County experienced the highest unemployment rate in West Virginia (12.2 percent) or about 151 percent of the U.S. average, while Monongalia County (4.8 percent) had the lowest jobless rate in the state, about 59 percent of the U.S. average.

In 2005, ARC used a four category county economic classification system to define the economic status of each county based primarily on three indicators: three year average unemployment rate, market income per capita, and poverty rate. The four economic status designations were distressed, transitional, competitive, and attainment. Distressed counties were the most economically endangered and attainment counties were the most prosperous. At the time of program funding, no county in the state received the highest economic status designation and only two received the second highest designation. Nineteen were designated distressed, the lowest rating, and 34 transitional, the second

lowest rating.⁹⁸ From 2005 to 2009, the poverty rate for the state was 17.6 percent or about 131 percent of the U.S. average.

ARC added a fifth economic status designation, at-risk, in FY 2006, between the lowest designation distressed and second-lowest transitional designation.⁹⁹ In 2012, only two of the state's fifty-five counties received the highest or second-highest economic status designations. Eight were designated as distressed, 13 were deemed at-risk and 32 were rated as transitional.¹⁰⁰

6.13.2 Project Description

Headquartered in Fairmont, West Virginia High Technology Consortium (WVHTC) is a 501(c)(3) non-profit company that helps technology companies reach commercial success. The importance of diversifying the economy of West Virginia provided the impetus for the program.

As traditional manufacturing, coal mining and labor intensive jobs declined due to technical advances required to increase productivity, both Senator Robert C. Byrd and Congressman Alan B. Mollohan recognized the opportunity to grow high technology enterprises within West Virginia. WVHTC was formed in 1990 to provide business support services to develop high-tech businesses in the state. The program offers entrepreneurial and business development training, consultation, professional resources, and investment funding to early stage technical businesses. The organization is comprised of three segments: Technology Park, Research and Development Group, and INNOVA Commercialization Group.

WVHTC INNOVA Commercialization Group (INNOVA) is a venture development organization focused on technology. It manages the primary startup-stage capital investment fund for entrepreneurs and new enterprises.

Along with preparing growing companies for future venture capital investments, INNOVA also determines and provides the appropriate resources and assistance a new business needs to evolve. It delivers a variety of entrepreneurial, educational, training, and networking events to start and grow a nascent business.

The length of program service varies from approximately six months for companies that are almost ready to enter the marketplace (and only require completion of paperwork and legalities), to roughly seven years for companies that require more extensive assistance. Depending on the situation, services over time can be curtailed or more ongoing. Continuing services may involve INNOVA taking a seat on a client company's board of directors. According to program staff, INNOVA stays involved until the company is solidly entrenched in the marketplace, i.e., "a going concern." Once the appropriate loans are paid off, INNOVA then drops out of the picture.

⁹⁸ County Economic Status, Fiscal Year 2005, Appalachian West Virginia.
http://www.arc.gov/reports/region_report.asp?FIPS=54999&REPORT_ID=26

⁹⁹ <http://www.arc.gov/research/SourceandMethodologyCountyEconomicStatusFY2002FY2005.asp>
<http://www.arc.gov/research/SourceandMethodologyCountyEconomicStatusFY2006.asp>

¹⁰⁰ County Economic Status, Fiscal Year 2012, Appalachian West Virginia.
http://www.arc.gov/reports/region_report.asp?FIPS=54999&REPORT_ID=37

6.13.3 Project Planning and Implementation

Beginning in the 1980s, West Virginia's economic lynchpins, the coal industry and traditional manufacturing, were in decline. It became obvious to Senator Robert C. Byrd and Congressman Alan B. Mollohan that diversification of the state's industries was required. A technology park was developed in Fairmont, a relatively centralized location in state.

The intention was to use models such as Innovation Works in Pittsburgh¹⁰¹ and JumpStart in Ohio¹⁰² to develop a 'software valley' in West Virginia. Five federal agencies, including the Criminal Justice Information Services of the FBI, the National Energy Technology Laboratory, The National Aeronautics and Space Administration (NASA), The National Institute for Occupational Safety and Health (NIOSH) and the Department of Defense, Biometrics Fusion Center (BFC) were located within this technology park.¹⁰³ These federal entities provided a fertile launch environment for promising West Virginia small businesses to subcontract to these federal agencies.

By the 1990s, the need for an organization to assist these inexperienced small businesses became apparent. The talented engineers and technical persons who founded these enterprises often lacked a basic background or experience in business. Funding became available for a resource to provide business development and formation expertise along with legal, accounting, and financial assistance. Funds for small early stage investments were also on hand, including a 2002 ARC grant to set up and staff the organization.

These businesses also required risk capital. If the business founders' funds became exhausted before the company was mature enough to obtain more formal sources of capital, these companies could fail. Seed stage investment funds were needed to sustain them until more formal and larger investments could be obtained. New high technology ventures require knowledge and funding to grow; they require management and financial capital-- both difficult to obtain in early stages of a business' development.

ARC was one of the earliest supporters of INNOVA. The 2005 funding, combined with funds from the earlier ARC grant, allowed statewide reach and the opportunity to serve small businesses or anyone with an idea, in a structured fashion. It also allowed INNOVA to leverage additional funds. With those funds, INNOVA provided finance professionals, marketing, operations experts, and technical assistance, either directly or from third parties at reduced costs.

INNOVA program administrators were unable to recall obstacles in the implementation of the program. They also reported the planning process was straightforward.

6.13.4 Economic and Community Impacts

ARC funding facilitated additional investment which made it possible to reach the number of individuals the program ultimately assisted. The funds also helped match program

¹⁰¹ <https://www.innovationworks.org/>

¹⁰² <http://www.jumpstartinc.org/>

¹⁰³ North-Central West Virginia's Technology Industry: A Pathway Through the 21st Century. Anderson Economic Group, LLC, 2006.

funds from other programs, as discussed below. The grant stipulated assistance be provided to high tech companies only. Nevertheless, INNOVA looked beyond high technology companies and used its expertise to assist other companies by referring them elsewhere or introducing them to their network of groups that could provide assistance. WVHTC staff uses its knowledge of West Virginia to access and employ statewide resources.

In January 2012, INNOVA, the West Virginia Jobs Investment Trust (WV JIT), and the Natural Capital Investment Fund (NCIF) began participation in the West Virginia Capital Access Program (WV CAP), an investment program made possible through the U.S. Department of the Treasury State Small Business Credit Initiative (SSBCI) funding. This program provides West Virginia access to \$13.1 million in federal dollars to fund new small business investment programs. Based upon projected demand, 58 percent of the total funds (\$7,651,010) are allocated to the Seed Capital Co-Investment Fund to be invested by INNOVA, NCIF and WV JIT. All funds must initially be invested within two years. This increased deal flow also brings with it increased requirements for Technical Assistance to ensure “investment readiness” and due diligence prior to investment, and loan and financial packaging.

The observation was made and upheld that through statute, ARC funds may be used as a match for other federal funds. INNOVA queried if this would be the case for the federal SSBCI program. With the assistance of Charles Howard, ARC General Counsel, a case was presented to the U.S. Department of the Treasury. The subsequent positive affirmation from U.S. Treasury allowed three of the eight WV CAP participants to enhance their pool of investment funding available under the program by freeing up ARC funds for utilization as approved matching funds.

Over the course of the program, \$1.8 million in additional funds were raised from the WV Economic Development Authority, the Claude Worthington Benedum Foundation, INNOVA internal funds and the WV Capital Access Program, funded by the U.S. State Small Business Credit Initiative, SSBCI).¹⁰⁴ Portions of each, totaling \$893,825, were directly used for investment alongside \$536,000 of ARC investment funds. If ARC funds were not available, INNOVA believes it would have been considerably more difficult to attract additional investment, supportive investment, and reach the number of people it did through the matching program to SSBCI.

The availability of INNOVA services and funding reached companies through word-of-mouth communication and referrals from other organizations. In essence, companies and individuals contacted INNOVA for assistance. As funding levels increased, so did INNOVA's opportunities to assist, resulting in more companies using INNOVA's resources.

Driven by ARC funding, the north-central West Virginia technology industry had a total economic impact of \$5.2 billion on the state.¹⁰⁵ In addition, it fostered direct construction economic impacts of more than \$111 million and indirect economic impacts of over \$200

¹⁰⁴ The West Virginia Capital Access Program (WVCAP) is the state's program designed to increase small business access to capital. The program was announced in December 2011 when the United States Department of the Treasury approved the state's application for State Small Business Credit Initiative (SSBCI) funding. http://www.wvcommerce.org/info/west-virginia-edge/wv-edge-issue1-012/small_businesses_score_big/wvcap.aspx

¹⁰⁵ Ibid.

million. Other benefits resulting from the projects included more stable regional employment, an increase in educational levels and income, lowered unemployment rates, and additional research activities and funding. While the program predicted serving 200 companies, it assisted more than 500 companies, 350-400 during ARC's funding period.¹⁰⁶

The INNOVA investment funds made it possible to approach other funding groups and foundations for additional funds. These dollars were spent on supplementary services to assist the client businesses such as legal, patent protection, accounting, marketing, and finance. Approximately \$100,000 was used to offset professional services costs and get the small businesses "investment ready." ARC funds made it possible to approach and attract additional resources to get support funds from foundations. Though ARC funds could not be used for direct labor expenses, more employees could be brought on by leveraging the monies for professional services, leading to "exponential growth," according to program officials.

INNOVA invested in 22 companies and provide services to additional companies which allowed them to enter new markets. Examples are available on INNOVA's website.

Program administrators acknowledge that initial job creation projections were overly optimistic. However, the program had significant impacts on individuals and businesses during the funding period. The following data are conservative, based on the time of investment only, and not five years forward as some other projects do:

- 22 investments in companies
- 45 full-time jobs created
- 8 part-time jobs created
- 144 jobs retained

The program has experienced significant growth in demand as demonstrated by an increasing number of applicants for assistance. To date, INNOVA has worked with more than 400 companies, placed over \$1.6 million of direct investments into 17 West Virginia companies, is recognized as a primary source of seed capital in the state and has raised about \$2.3 million in its seed stage investment capital fund.¹⁰⁷

6.13.5 Lessons Learned

The lessons learned from this program are drawn from interviews of program administrators and report documents either provided by program administrators or located online.

- **Collaboration and communication among investment groups can improve efficiency.** When individuals and companies apply to multiple funding agencies, collaboration and communication can facilitate the grant application process for potential grantees. Processes can be integrated whereby applicants need only complete one common funding application rather than multiple detailed applications, much of which can be redundant.

¹⁰⁶ Program Director Interview

¹⁰⁷ <http://www.wvhtf.org/businessdevelopment/innova.php>

Collaboration also aids funders by identifying organizations in the grant application pipeline and the amount of assistance each requires to become self-sufficient. It allows funding agencies to coordinate and distribute their tasks to more efficiently provide grantees the funds needed to bring them to marketplace and stand on their own.

INNOVA also provides workspace for two other support organizations in its facility. With resources available under one roof, these organizations can take a company from initial development through the investment stage – all at one time. The key is collaborating to efficiently use time and resources and ultimately service more companies.

- **ARC funds can leverage additional funds from private investors.** The power of leveraging funds became apparent to INNOVA as it was able to use ARC funds to get other funding agencies to also step up to the plate. The ability to use ARC as matching funds doubled available resources.
- **Funding direct labor can be problematic.** Because of various restrictions, finding the funds to directly hire personnel is a challenge to funding agencies.
- **Many nascent high technology companies require assistance to navigate challenges before their final product is ready for market.** Professional and technical services represent a most important opportunity for assistance. There is considerable demand for assistance among new high-tech entrepreneurs and businesses before they become self-sufficient. As one program official stated, “There are so many opportunities and few resources.” For many new enterprises, intensive due diligence in the application process and mentoring from experienced experts creates a strategic path to commercial success.

6.13.6 Conclusion

West Virginia's High Technology Consortium Foundation's INNOVA Commercialization Group is an essential contributor to the state's tech-based economic development movement. It has been a catalyst for high technology growth and innovation, helping many start-up businesses succeed by providing critical missing elements such as commercialization assistance services, seed-stage investment capital, and entrepreneurial education programs, training, business support services and networking events.

6.14 Kentucky Highlands Energy Business Boot Camp

The purpose of the project was to assist new, renewable or alternative energy-related entrepreneurs, researchers and inventors move towards successful businesses and sustainability. The Kentucky Highlands Energy Business Boot Camp offered intensive performance-based entrepreneurial training and mentoring programs for these entities to develop profitable, fundable and sustainable business models and create employment opportunities in the region. This program was classified as an Energy/Environmental project.

6.14.1 Community Profile

Kentucky Highlands Investment Corporation (KHIC) was founded in 1968 to stimulate growth and jobs in a nine-county region of Southeastern Kentucky. KHIC's mission is to provide and retain employment opportunities in Southeastern Kentucky through sound investments and management assistance.¹⁰⁸ In 2003, KHIC expanded its service area to twenty-two counties. It includes the counties of Bell, Clay, Clinton, Cumberland, Estill, Harlan, Jackson, Knox, Laurel, Lee, Leslie, Letcher, Lincoln, Madison, McCreary, Owsley, Perry, Pulaski, Rockcastle, Russell, Wayne and Whitley.

In 2012, 54 counties in Kentucky were part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi. Each of the 22 counties covered in KHIC's expanded service area were included in the 54-county ARC legislation. Employment in the area relied heavily on coal mining – more than twice the dependency of ARC counties in West Virginia and Pennsylvania.¹⁰⁹ This strong reliance was compounded by a lack of job opportunities in other fields.

Employment in the coal industry had been in decline for years. By 2008, coal mining accounted for only one percent of Kentucky employment. Even in Eastern Kentucky counties, mining jobs ranged from three to 23 percent of the employment base and faced substantial long-term unemployment and poverty rates exceeding thirty-three percent.¹¹⁰

The region was challenged economically when the grant was awarded. The 2012 population of the Kentucky Appalachian region was about 1.2 million residents. These residents realized average per capita income of only \$28,928, about 66.1 percent of national and 81 percent of both state and the entire Appalachian Region in average per capita income.¹¹¹

ARC assigns each county one of five possible economic designations – distressed, at-risk, transitional, competitive, or attainment- with distressed counties being the most economically endangered and attainment counties being the most prosperous. In 2012, three-quarters (76 percent) of the 54 counties in Appalachian Kentucky were designated distressed, the lowest economic status. The remainder were defined as at-risk (17 percent) or transitional (7 percent). Not one of the counties in Appalachian Kentucky received either of the two higher economic status ratings.¹¹²

6.14.2 Project Description

The Kentucky Highlands Energy Boot Camp was an intensive, entrepreneurial performance-based training and mentoring program for developing businesses. It attracted entrepreneurs, law makers, public agency officials, angel investors, energy

¹⁰⁸ Kentucky Highlands Investment Corporation. About-khic. www.khic.org

¹⁰⁹ Roenker, Jonathan M. The Economic Impact of Coal in Appalachian Kentucky. <http://cber.uky.edu/Downloads/Roenker02.htm>

¹¹⁰ The Impact of Coal on the Kentucky State Budget, Executive Summary. <http://www.maced.org/coal/executive-summary.htm>

¹¹¹ http://www.arc.gov/reports/region_report.asp?FIPS=21999&REPORT_ID=53

¹¹² http://www.arc.gov/reports/region_report.asp?FIPS=21999&REPORT_ID=37

business researchers and the public to its two symposia, one at the end of each energy business training cohort. The program was conducted in conjunction with Technology 2020's Center for Entrepreneurial Growth.¹¹³

Program goals included creating a fundable, sustainable and profitable business model to generate jobs in the region. There were no fees to participating businesses, each receiving stipends to offset costs associated with classroom participation, ongoing strategic planning, field exercises, marketing execution, travel and time away from their businesses.

Training incorporated classroom learning, coaching meetings, networking events and a regional energy symposium. ARC funds underwrote contractual costs. Companies were required to attend four half-day training sessions focused on building a sustainable and fundable business. Mentoring and materials were provided to complete program assignments. Attendance at networking or market-specific events was compulsory, with stipends covering travel and costs provided by the program.

Companies were obliged to prepare presentations describing essential components of their businesses. These were used at the symposium and meetings with partners, capital sources, local, state and regional organizations. Businesses met with a marketing firm to develop materials and later present an overview of their company at the symposium. They were tasked to develop a marketing plan, identify target markets, pinpoint partners or channels to deliver their sustainable business model and develop a financial plan and capitalization strategy. Businesses were coached and required to apply for applicable grants and programs pertaining to their business.

The program sought to identify businesses with the highest likelihood of success. A maximum of six slots were available per round. Companies were vetted through a screening process that included accomplishments or ideas, background biographies and resumes, references, on-site visits and interviews. Two additional individual entrepreneurs were invited per session and received a limited stipend amount.

Initially, the program expected to conduct two Boot Camps with four to six participants at each, yielding eight strategic plans. It hoped to create or sustain 12 to 16 jobs over roughly the subsequent two years. Four networking events were planned with each Boot Camp attracting 24 participants at each of two symposia.

6.14.3 Project Planning and Implementation

In 2006 and 2007, Kentucky Highlands Investment Corporation (KHIC) started to see the necessity and opportunity for economic diversification in the Kentucky Highlands region. While the local economy depended heavily on mining, KHIC recognized that forward thinking would be required in order to diversify. They wanted to fill a pipeline with new businesses that would be sustainable and profitable while also creating jobs. They saw a latent ability within the service area that could tap into the energy sector. KHIC wanted to commit to entrepreneurial development so they paired up with venture development organization Tech 2020, which was interested in helping small business owners turn

¹¹³ Created in 1995, Technology 2020 is a public-private partnership whose mission is to grow new businesses and high quality jobs by capitalizing on the unique technology resources of the Tennessee Valley Corridor and to advance the region's reputation as a nationally recognized center of technology-based entrepreneurship.
<http://www.tech2020dev.org/>

ideas into a reality. The companies had a previous relationship, both recognized the need, and together had the resources to create change.

KHIC and Tech 2020 wanted to develop an accelerated program to help launch businesses, and developed the plans for the Energy Business Boot Camp. While originally planned to last 10 to 12 months, it was eventually decided that a six month program had a better chance of attracting participants. They also added a \$7,500 stipend to attract participants: an incentive for them to get out of the office and network. KHIC planned two Boot Camps with six participants each, with each camp including two networking events and a concluding symposium at the end. They allowed themselves two months for the marketing and selection process, and slated the first camp to start in November 2007.

The cost estimates for the project were based on similar past KHIC investments. KHIC negotiated with Tech 2020 and researched what granting agencies were supporting such projects. They estimated the cost to be \$225,000 for the program over 18 months. The cost was split three ways between ARC funding, the Kentucky Cabinet for Energy, and KHIC investment. As the Kentucky Cabinet for Energy's grants are limited, and KHIC limited the amount they could spend on the Boot Camp, ARC funding was crucial. This project would not have been undertaken without the grant.

KHIC used several techniques that they had used in the past to ensure the project's success. The experienced KHIC staff understood the importance of having the right people in the right roles to provide the highest level of expertise and understanding for the corresponding project. Bob Wilson took the lead on this project, leveraging his years of experience leading entrepreneurial companies, contacts within Tech 2020, and energy expertise and knowledge. Project leaders also knew, however, that while people are important, the project design is important as well. Wilson's experience allowed him to lead a team in order to create a solid plan that, in conjunction with the people running it, led to a successful project. KHIC had a reputation for taking on challenging projects, but had gained respect for constantly improving and taking responsibility for any mistakes. This led to strong relationships with other organizations, including ARC and the Energy Cabinet. By keeping lines of communication constantly open, KHIC built strong and trusting connections. They kept agencies apprised of the project through regular phone calls, as well as bi-yearly visits to the Cabinet to update them, thank them, and explain any discrepancies. KHIC also had a lot of encouragement from their own board, which allowed them to step out and try something new while knowing they were being supported.

While the Boot Camps were executed successfully with overwhelmingly positive results, there were a few challenges KHIC faced along the way. The main obstacle was recruiting entrepreneurs to participate, as many did not want to travel and take time away from their companies. As 22 counties were included in the recruitment pool in order to ensure enough participants, and some locations were as much as a four-hour drive away, the stipend was not always enough to entice people to sign up. KHIC understood that, as they were recruiting from a generally older demographic, they would need a more "boots on the ground" approach to appeal to the targeted entrepreneurs, as opposed to using technology and relying on electronic communication. They sent representatives to the properties of prospective participants in order to build a trusting relationship, as well as relying on their reputation as a legitimate company with

connections and resources. KHIC also overcame budgetary restrictions by cutting down on unnecessary and redundant costs, as well as by closely considering what costs were most important in reaching the goals of the program. In the end, the program came in on-budget and the Boot Camps were successful.

6.14.4 Economic and Community Impacts

The Energy Business Boot Camps achieved both measurable and immeasurable success. Both Camps ran smoothly and with overwhelmingly positive feedback from the participants. Both of the keynote speakers were highly successful and recognized leaders in their fields, and the networking events were beneficial to all who participated. As for the goals set during the planning stages, all projected outcomes were either met or exceeded.

Participants went on to apply what they had learned during the Camp to their businesses. Survey feedback said that participants had never had such an effective, intensive, and beneficial assimilation of good information and networking experiences in such a short time, and that it really propelled their thinking about business. Participants won \$3.36 million in leveraged private investment. Much of this was from grants, which was improved during the grant writing seminars during the Camp. Moreover, eight out of ten participants were successful in receiving loans for their businesses.

One standout participant was Nathan Hall, who went on to receive the Thomas J. Watson Fellowship which funded a year of study around the world. Hall travelled the globe researching the use of biofuel internationally and developing his research on switch grass and forest sustainability as a means to develop fuel. He now speaks about his travels and research, leading and inspiring other entrepreneurs in the field of energy. Another outstanding product of the Boot Camps was Genesis Development, Kentucky's first green energy company that provides and educates on alternatives to coal. Countless other participants went on to incorporate the green energy knowledge into their businesses, succeeding in creating opportunity for economic diversification in the Kentucky Highlands region and creating new business that is sustainable and profitable.

Ten businesses were improved from 2007 to 2012, seven created and three retained, according to program officials. A dozen jobs were created and 12 more retained. More than \$3.36 million in leveraged private investment was realized. In addition, \$1.714 million in energy technology grants was awarded to participating companies.¹¹⁴

Companies heavily involved in research and development were able to increase their cash assets as a result of this program. It also increased the diversity of businesses in the region.

6.14.5 Lessons Learned

Lesson learned were collected from interviews of program officials.

- **Understand and adapt to your target demographic.** During the recruitment process, KHIC had a specific demographic in mind for participants in the Boot Camps. Problems arose, however, as they realized this slightly older

¹¹⁴ Program Survey

and more traditional group preferred in-person communication, made difficult due to the large geographic spread of the participating region. By understanding what would build this group's trust, and by changing their methods of recruitment, KHIC managed to successfully recruit enough participants for the program.

- **Communicate openly and honestly with funders.** Through consistent and transparent communication, KHIC managed to build strong and lasting relationships with funders. KHIC had regular phone conversations as well as in-person meeting where they shared not only progress, but also any setbacks. This created a trusting relationship that allowed the project to recover from setbacks and have successful end results, as well allowing for more potential funding into the future.
- **Cut costs by keeping the end goals in mind.** While KHIC had originally planned for a much larger budget, they realized much of the planned spending was unnecessary. By only spending what was necessary to achieve the goals of the project and cutting out all frivolous spending, the project managed to come in on-budget while keeping funders within their constraints.
- **People are important, but so is project design.** As an established organization, KHIC had many experienced employees within the company. By selecting leaders with relevant and substantial experience, such as Bob Wilson, the project was provided the significant advantage of years of accumulated knowledge. It was not only having the right people on board, but having them in the right seats that led to the creation of a solid and achievable project design that was certain to realize success.

6.14.6 Conclusion

The program created a vibrant network of energy-related entrepreneurs and partners working to meet market needs in this economically challenged region of Kentucky.

Success was advanced by including a stipend allowing participants to get away from their workspaces to attend the Boot Camp and related events and to complete program requirements. This was a necessary and important inducement for participants and would have been unlikely, or may have not occurred at all, without ARC funds.

6.15 North Carolina Department of Commerce FY 2010-2011 Wood Products/Home Furnishings Initiative

In 2010, ARC awarded an amended business development grant to the International Trade Division, State of North Carolina Department of Commerce for \$25,000 to expand trade opportunities for North Carolina and other states in the Appalachian Region. The program was designed to promote the Asia/Pacific Rim initiative to assist companies export wood products, manufacturing supplies and home furnishings.

ARC funds from this Business/Training grant were used to purchase booth/pavilion space at the China International Furniture Manufacturing and Raw Materials Exhibition (FMC China). ARC funds totaled \$75,000.

6.15.1 Community Profile

Twenty-nine counties in North Carolina are part of the Appalachian Region, a 205,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi.

The 2012 population of Appalachian North Carolina was just over 1.7 million residents who realized average per capita income of only \$34,215, approximately 78 percent of national, 90 percent of North Carolina and 95 percent of all Appalachia in per capita income. Average per capita income by county ranged from 62 percent of U.S. average in Graham County (\$26,988) to 92 percent in Polk County (\$40,232).¹¹⁵

ARC defines the economic status of each Appalachian county with one of five possible economic designations based primarily on three indicators: three year average unemployment rate, market income per capita, and poverty rate. The statuses are distressed, at-risk, transitional, competitive or attainment. Distressed counties are the most economically endangered and attainment counties are the most prosperous. All Appalachian counties in the state but one was defined either as at-risk or transitional, the second lowest and middle ratings. The exception was Graham County which received a distressed designation, the lowest possible classification. In FY2012, none of the counties in the region received either of the two higher economic status designations of competitive or attainment.¹¹⁶

Only three counties in Appalachian North Carolina experienced unemployment rates below the national average in 2012. That year, the unemployment rate in Appalachian North Carolina was 9.4 percent. It exceeded both the national and entire Appalachian region's unemployment rate of 8.1 percent and was about equal to the rate for the entire state. Unemployment rates in the individual ARC counties ranged from 7.3 percent in Henderson County to 16.8 percent in Graham County.

6.15.2 Project Description

The program goal was to recruit 14 to 20 wood, supply and home furniture companies each year to participate in the trade shows held at the Appalachian Pavilion of the China International Furniture Manufacturing and Raw Materials Exhibition (FMC China) or its earlier incarnation Interzum Guangzhou. These shows continue to be the largest and most comprehensive woodworking machinery and accessories trade fairs in all of Asia. FMC China provides an international sourcing platform for buyers and manufacturers, covering one million square feet. Small businesses wishing to attend on their own do so at considerable expense.

The grant helped to offset costs to participating businesses. ARC funds were used to purchase the pavilion and floor space, significantly cutting down on individual costs. The

¹¹⁵ United States Department of Commerce, Bureau of Economic Analysis, Local Area Personal Income, 2012. Compiled by the Appalachian Regional Commission, March 2014.

¹¹⁶ County Economic Status Fiscal Year 2012, Appalachian Regional Commission.

cost of the pavilion can range from \$2,500 to \$40,000, according to program officials. Travel for the grant team is state-funded and applied to the required support match. ARC funds covered half the required participation fee. Participating companies pay the other half, which goes towards the required matching funds. Freight, lodging, food and transportation costs are also divided between the businesses and ARC.

ARC's Export Trade Advisory Council (ETAC) office works as a team to promote the show in ARC states and encourage attendance by companies from the region. As grant participants, companies have an opportunity to learn about overseas markets without having to manage the somewhat intimidating logistics of international travel on their own. Without ARC support, at least some of the participating businesses may not have been able to afford overseas travel and therefore denied the opportunity to learn first-hand the potential benefits of expanding into this market.

The ARC-sponsored Appalachia USA Pavilion at the 2010 Interzum Guangzhou home furnishing show presented the opportunity for companies in Appalachian counties to participate while mitigating financial risk to their businesses. One goal of the program is for companies attending with ARC support to recognize the return-on-investment opportunities of international trade and, in the future, choose to fund their subsequent participation without ARC assistance.

A catalog of various services provided by the team to participating companies included availability of an on-site interpreter, pre-arranged appointments with potential customers, travel logistics from the Appalachian region to Shanghai China, and product shipment, among others. The North Carolina representative headquartered in the Hong Kong office handles much of the marketing, and provides additional services to participants such as translating business cards, brochures and marketing materials. Costs incurred by attending businesses count as part of the matching requirement. Travel for the state of Mississippi staff contingent also counted towards the match.

6.15.3 Project Planning and Implementation

The program was conceived by ARC's Export Trade Advisory Council (ETAC), a panel composed of one or two members from each state in the Appalachian Region with expertise in exporting. Approximately 10 years ago, this council considered divergent sectors affecting multi-state regions. It concluded lumber, home furnishings and manufacturing were common and prevalent to the regions. The wood and home furnishing sectors were chosen for a pilot program whereby these products were exhibited as a unit at international trade shows. ETAC unanimously approved the program which became a model for other states, products and sectors. The trade office of the North Carolina state government volunteered to lead the project, as they had an office overseeing these products.¹¹⁷ The grant focused on the Asia/Pacific Rim where hardwoods and softwoods from the region were previously established in the market.

The grant was supervised by the trade manager from the North Carolina Furniture Export Office headquartered in Highpoint, NC, where many furniture manufacturers were located and by the North Carolina Asia Pacific office located in Hong Kong. North Carolina sends its furniture representative to the show, at the state's expense. For the

¹¹⁷ Note that some other states, including Mississippi, also had offices overseeing these products.

wood and home furnishing sector, the funds go exclusively to North Carolina. Other states have taken the lead for additional business sectors, such as mining, though North Carolina remains the standard for the more recent programs, having successfully grown its program over a multi-year period.

The first of these ARC grants was executed in September 2008, to support a regional Asia/Pacific Rim export initiative featuring Appalachian furniture/home furnishings and wood/forest products. ARC provided \$25,000 with a required match of \$100,000 in cash, contributed services or in-kind contributions from program participants. The funds were used to support the delegation to the China International Furniture Fair/Interzum in Guangzhou, China in March 2009.

In 2009, the award was amended. ARC provided an additional \$25,000 funding support with a required additional match of \$50,000, bringing the total match to \$150,000 through September, 2010. Again, funds supported the delegation attending the Interzum/China show in Guangzhou, China in March 2010.

The third year of funding realized an amendment in August 2010 for an additional \$25,000 from ARC, bringing its total contribution to the program to \$75,000. Matching funds increased by \$50,000 setting a total program match requirement of \$200,000. This time the grant supported a delegation to the Furniture Manufacturing & Supply China in Shanghai, China in September, 2011. ARC funds helped reduce exhibition costs for the participating Appalachian businesses. A 27-member delegation representing Appalachian furniture and wood product businesses attended the show, generating more than \$36 million in new Appalachian export sales.¹¹⁸

The grant agreement was amended once again with additional ARC financing of \$25,000 from July 2011 to the end of 2012. This brought ARC total funding to \$100,000 and increased the matching funds by \$25,000 to a total of \$225,000. It supported the delegation to Furniture Manufacturing & Supply China in Shanghai, China in September 2012.

One program official likened the program administration to a “well-oiled machine.” No specific obstacles were reported by program officials either in the planning or initiation of the grant. Program managers noted that the multi-year program runs smoothly and that ARC staff is particularly easy to work with and available to solve any issues that occur.

6.15.4 Economic and Community Impacts

The program works not only for the benefit of North Carolina but for the good of the entire ARC region. It is an exceptional example of cooperation among ARC states. For instance, data are shared among the state delegations, including lead generation, sales information, and other business metrics. The grantee collects, analyzes and distributes to participants the number of leads generated, immediate sales from the show, contracts signed and anticipated sales in the subsequent 12 to 18 months based on who the representatives met at the show and other factors.

In 2009, expected sales totaled \$14 million over the subsequent 12 months. In 2010, floor sales reached \$200,000, with expected sales of \$8.5 million. More than 4,200

¹¹⁸ ARC News Brief, September 2011, Appalachian USA Delegation Attends Shanghai Trade Event.

containers of product were sold. Assuming an average container value of \$10,000, \$42 million in sales were realized, pushing total sales for the year to exceed \$50 million.

In 2009, the grant supported travel to two shows in China Guangzhou. The first was attended by three companies (and/or states); the second by 13. Each company had its own built-out space in the sizable pavilion (roughly 2,600 square feet). North Carolina and Mississippi shared space at this show, but now each has its own designated area. Exhibit space can also be divided by company, client or distributor as needed. In March 2010, 14 companies attended the shows; in 2011 there were ten. Private areas are also provided, allowing business representatives to negotiate contracts, logistics and other business issues.

China has become North Carolina's second largest export market with sales in excess of \$2.8 billion in 2013.¹¹⁹ The nation has been one of North Carolina's top growth markets for the past 10 years, generating tens of millions of dollars in sales.

Businesses are quick to realize the opportunities inherent in this market. Officials note that even before the show ends, many novice companies attending the shows indicate interest in returning the following year. However, the grantee has set a program goal that once companies attend with ARC support and are introduced to this market they attend on their own in subsequent years. Based on many years of experience, program officials report that most companies would not delve into these international markets without ARC funding to reduce their costs, nor would they be willing to manage these considerable and complex international logistics on their own.

6.15.5 Lessons Learned

Lessons learned were gleaned primarily from interviews of program officials.

- **Maintain a representative on site.** Though the show is held in Shanghai, the director of the program stationed in Hong Kong plays a critical role in managing the logistics for clients. The added expense of the director's travel to the show is well worth the cost, program officials agreed. North Carolina program staff has strong relationships with all export partners that serve the state. If a point-person has any difficulties with a client, state officials are available to intervene. Relationships are essential, and it is likely that not all states have fostered these kinds of connections.
- **Realize the work and financial commitment involved in managing international programs.** Should a new agency be appointed to spearhead this type of program, administrators should have an understanding of the amount of work involved. Plus, they should realize this can be considered "an unselfish act" on the part of a state, as the benefits accrue beyond their state boundary, while any costs are incurred by the state alone. For instance, if no companies participate, the state is still responsible for costs of the pavilion and space. The commitment is considerable, as several individuals both in-state and overseas work on these programs year round. Gaining government support for a project that "benefits the greater good" rather than one's own state is sometimes difficult to achieve in state legislatures.

¹¹⁹ U.S. Exports to China by State, 2004 to 2013. The U.S.-China Business Council.

- **Find the right mix of people to work on these programs.** The skills involved in managing and running these programs go beyond international trade. To be successful, the expertise of the staff must cover a wide range of skillsets. They include marketing, business logistics, and other areas of expertise.

6.15.6 Conclusion

The logistics of international trade can be intimidating, especially to small- and medium-sized businesses new to overseas sales. This grant successfully facilitated small- and medium-sized businesses in ARC states increase their exports to China and the Pacific Rim. Companies were encouraged and assisted in marketing their products at one of the largest furniture and wood products show in Asia, held in Shanghai, China. By providing business assistance, education about opportunities, and logistical support, this long-running program facilitated businesses' return-on-investment through international trade.

The program provided across-the-board assistance to existing new-to-export companies, many not aware initially of the potential impact of international sales on their businesses. It encouraged entry into new markets by paving the way to attend the China show at reduced cost and risk to their businesses. Benefits accrued to companies in all Appalachian states, not just in North Carolina.

6.16 Key Lessons Learned

The "Lessons Learned" section can be a beneficial tool for project managers developing comparable future projects. It summarizes shared problems encountered in the course of the programs and how the managers were able to resolve them. Future administrators may avoid similar hurdles that may occur in the course of upcoming projects by applying these lessons to their unique situations.

The Key Lessons Learned were compiled by reviewing the 15 individual case studies. They harvest shared experiences from the unique programs that seem to overlap a number of projects.

The lessons from ARC's Job Creation and Retention Program Evaluation fall into four categories: Community engagement, program flexibility, outcome measures, and the grant process. The Key Lessons Learned are presented below.

6.16.1 Engage, Educate and Involve the Community

A number of program administrators stressed the importance of securing community support and goodwill for their programs through engagement. They noted community buy-in for programs can be reinforced in many ways. These include tapping into regional pride; awakening its sense of history, evoking shared needs and underscoring economic opportunities. Sometimes involvement in a program can be encouraged by reminding the community that their taxes fund the program and consequently it is their responsibility to insure good stewardship of those dollars.

In the City of Toccoa, Georgia, for example, the community rallied around a vision for downtown revitalization based on the City's historical significance and community pride. Using town hall meetings, public hearings, pamphlets, newsletters presentations and

mockups, citizens were kept informed of each phase of construction. Soliciting input on the project and inviting participation in ceremonial events fostered community engagement and support for the program.

Sometimes a program encounters resistance, compelling administrators to supply additional justification and instruction before the community champions the agenda. The Heartwood: Southwest Virginia's Artisan Gateway faced initial opposition from established artistic organizations and attractions that perceived the venue as competition for tourist dollars. Program administrators were able to prove these skeptics wrong, garnering support for the program by assuring local artists of the mutual benefits Heartwood could provide, including opportunities for cross promotions and as a staging area to visit local artisans. Local officials who were at first skeptical that Heartwood could serve not only the county in which it was located, but multiple surrounding counties were also persuaded by its success.

In New York, the Finger Lakes ReUse Center involved partners and stakeholders beginning with the initial planning process, building support based on the mutual environmental and economic needs of the community. Community involvement was also a key factor in the success of the Maryland Great Allegany Passage (GAP) Historical Trail Program which built support by engaging locally invested leaders and grant administrators early in the grant process.

6.16.2 Change is Good – Be Flexible

Program attainment can occur even with mid-course modifications. Based on observations by program administrators, the New York Finger Lakes ReUse Center changed program priorities from environmental and economic bases to a program which focuses on so-called human experiences.

A number of ARC funded academic programs improved, added to or modified curricula based on input from experts in the field. The results were graduates better prepared to join rapidly changing job markets. By tapping existing market knowledge and technical experience, program offerings were broadened, attracting students from additional fields of study.

The GAP Economic Development Program in Maryland modified its business certification program mid-course by combining two processes making it more efficient, popular and successful.

In Kentucky, the Energy Business Boot Camp changed its methods of recruitment to attract the target demographic and maintain the group's trust. The program also cut costs and spending to achieve the project goals.

6.16.3 Mind Your Measures

It can be challenging to determine where one program begins or ends, and whether a specific program generated identifiable outcomes. In a number of instances, programs and funding cycles overlapped, making it difficult for grantees to specify outcomes resulting solely from ARC funding. In some cases it was difficult for administrators to determine if outcomes were the result of programs funded by more than one agency, during multi-year funding cycles, or began before ARC's grant period got underway. Staff

changes exacerbated these issues and program history was lost as individuals intimately involved in the programs were not available to interview.

So called “soft” outcomes, like “community pride” or “historical interest” are difficult to quantify and measure. It can also be problematic to agree on the variables to tally when measuring concepts like “the growth of tourism.” In addition, some outcomes take longer to develop than the length of the grant period – and outcomes may occur or continue beyond a project period and in fact after the program evaluation has been completed. Administrators are sometimes unable to track outcomes, for example in instances where program graduates move out of the region and lose contact with the program.

In some cases, program outcomes prioritized by the administrators or grant partners may not coincide with those of the local community. In Heartwood, for example, the community hoped to slow or halt the outflow of educated young people from the community. Program administrators, on the other hand, were more concerned with attracting new residents and new high tech businesses to the area. At the Ohio Farmers’ Markets, the program was successful in bringing healthy food alternatives to the region despite the participants not necessarily completing the formal marketing plans and strategies stressed by the administrators in the grant.

Larger outcomes were not always agreed to be more desirable. Positive outcomes, such as job creation, that were the result of one or a few large businesses, were viewed by some as more risky and potentially less sustainable than the fewer jobs created by more numerous but smaller businesses.

Program goals sometimes varied from those of government partners. Whereas politicians most desired short-term revenues, some program administrators and associates prioritized more long-term payoffs.

In at least one instance, the administrator’s need for follow-up data was not impressed sufficiently on program participants, resulting in a lack of data to adequately gauge the success of the program. In the future, it was agreed to more compellingly advise participants that submitting outcome data was a condition of participation in the program.

Other issues of measurement ensued. In the Maryland case, electronic counting devices on the hiking and biking trails did not work as anticipated. In Toccoa, Georgia, there was a 10-year delay in beginning the renovation construction. Nevertheless, administrators, including one in Pennsylvania, stressed the importance of collecting the right type of data that can inform and hopefully impress the entities that provide the funding.

6.16.4 Fine-tune the Grant Process

A number of program administrators reported challenges navigating the proposal writing or grant administration processes, and offered some practices that might be adjusted. At least one conceded the difficulty in writing a grant proposal for a new program. It noted from experience, that submitting a proposal supplementing an existing program was more efficacious. However, some requests for proposals had to be passed over, since it was not always feasible to identify a program upon which to add another grant.

Staff changes at the granting agencies could be frustrating for applicants. Historical knowledge was lost, relationships had to be re-started, and new personnel had to be

trained. In some cases, new staff simply made errors or delayed submitting materials, which led to administrative delays and/or funding denials.

Unanticipated hold-ups in approval processes could delay the spending of grant funds within the permissible project timeframe, resulting in having to return uncommitted funds to the funding agency. Such was the situation surrounding the approval for a wind turbine at the Mountain Empire Community College in Virginia. Also, as a grant period deadline approached, that program felt compelled to purchase program equipment before it could hire an appropriate faculty person. This resulted in missteps in the purchase of highly technical program equipment which turned out to be inappropriate for the project at hand, but fortunately could be used for another project.

Other grant administrators noted challenges coordinating multiple funding sources, over-scaling the scope of the program, and the short timeframes in which to get proposals and reports completed and submitted. One grantee regretted that officials had failed to sufficiently plan for the end of grant support.

7 Rural Policy Interviews

7.1 Background

The purpose of this section of the report is to provide context to the findings of this evaluation. Appalachia is a unique region with various assets and challenges. To design appropriate recommendations and solutions for this Region, it is important to first understand the key challenges to development, desired outcomes, and what types of solutions are likely to work.

In an effort to gain insight into these concepts, experts in the field of rural development were contacted for discussions regarding the challenges, opportunities and strengths of areas like Appalachia. These experts included practitioners, researchers, and funders. The eleven individuals who participated were asked about the key challenges to the Appalachian Region, promising industries, and best practices for measuring the success of an investment in the Region. A few of the relevant experts were also asked about their thoughts on the role of outside funding in the Region. A list of 17 questions¹²⁰ was used to guide the discussions with the development experts. The discussions were conducted as 30 to 60 minute phone interviews with each expert over the span of five weeks.

In all, 18 development experts were contacted and interviews were held with eleven of these individuals. The first nine experts were selected by the HDR team, in conjunction with ARC, based on available contacts and experiences working in rural development. The remaining nine experts were recommended by the first set of experts interviewed. The majority of experts (eleven) were first contacted by ARC through an initial introductory email¹²¹ explaining the background of this evaluation and why the HDR team wanted to speak with them. From there, the team followed up with the development experts to schedule individual phone interviews and email the specific questions.

¹²⁰ The full list of questions and the experts interviewed can be found in Appendix XX of this report.

¹²¹ The remaining seven experts were contacted first directly by the HDR team.

7.2 Summary of Discussions

The conversations with development experts covered three main themes: key challenges for rural communities in the United States as a whole and Appalachia in particular; target industries that the Appalachian Region should focus on; and how to measure the success of investments in rural communities. A few relevant experts were also asked about the roles of public and private funding entities in Appalachia. The remainder of this section discusses the interview findings.

7.2.1 Challenges in US Rural Communities

A primary focus when evaluating the best approach to allocating resources for rural development is identification of the key challenges and the context surrounding these concerns. Two key areas were discussed: major challenges faced by rural communities when trying to improve their well-being and how these challenges have changed and are expected to change over time.

Major Challenges

The respondents indicated three main challenges to rural economic development: lack of leadership and vision for future development; lack of stable, high-paying jobs; and a reduction in investment in rural development.

The first challenge identified is that rural communities are often faced with a lack of leadership and vision for the future direction and growth of the region. Ideally there should be local leadership to develop growth strategies for each community, based on that particular community's assets and needs. Without this leadership and direction, it is difficult to achieve any long term development.

The second challenge noted is the lack of stable, high-paying jobs making it difficult for Appalachia to have a steady or growing economy. With the recent outflow of many manufacturing companies and associated loss of many well-paying jobs, it has been difficult for local workers to find replacement jobs with comparable pay. Instead workers are forced to accept the first job available, which is often lower-paid.

The third challenge that experts pointed out is a reduction in government investment in rural development, possibly due to the lack of rural advocacy at a national level. With high unemployment and a small tax base to draw from, these rural communities have limited financial resources of their own and rely heavily on state and federal funding. Without these funds, the communities' aging infrastructure is becoming more dilapidated and there is little money to build additional infrastructure needed for quality of life improvements. The diminished government investment is also exacerbating the growing disparities between rural and urban areas. With the loss of many traditional manufacturing jobs in rural areas, and as more opportunities and more government money go to urban areas, experts are concerned that without changes, there will be little economic opportunity left for people who feel connected to and remain in these rural communities.

In addition to these three primary challenges, some experts also discussed the challenges associated with brain drain and attracting youth to rural areas. Rural areas are often unappealing to younger populations, who leave for bigger cities, which have

greater access to the knowledge sector and a variety of well-paid, high-skilled jobs. The lack of a high-skilled labor force and the brain drain associated with younger adults leaving the area create a unique set of challenges. Rural areas, with their remoteness and lack of broadband and transportation connectivity, tend to attract older, retiring populations who seek the slower pace of life and beauty of nature associated with these areas. This demographic typically does not contribute to the workforce.

Evolution of Major Challenges

Experts agreed that these challenges for rural areas have been persistent over time. Despite major economic improvements that have occurred over the years, in part due to ARC's investment, the Appalachian Region is still lagging behind the rest of the national economy. However, the situation is now more severe given the loss of much of the manufacturing industry and far less government investment in the Region.

Broadband was identified as a newly emerging need for rural communities in Appalachia. With the introduction of broadband to most areas in the country, the Appalachian Region will certainly be left behind without it, though unfortunately, investing in this technology will not guarantee growth in the Region either.

The challenges facing the Region have been relatively consistent over time, and the experts tended to agree that these challenges would likely remain and worsen over the next decade or two. Experts anticipate a further dwindling of government investment in the Region, which will put pressure on the infrastructure and public resources, such as schools and hospitals.

Experts also expect the economic gap between subregions in Appalachia to widen in the future. Many of the investment decisions made today, including the location of broadband infrastructure or roads, will promote growth in some areas and not others. Rural areas with better connections to outside markets will be more likely to experience stronger growth.

The selection of locations for the installation of broadband is closely related to concerns about the ability of the Region to adapt to rapidly changing technology. Technology improvements are now growing at an exponential rate, and workers will need to learn new skills to adapt. Whereas before workers could often train for a position once and remain in that job the rest of their career, the workers of the future will need to practice continuous learning throughout their careers. Incorporating ever-changing technologies, manufacturing jobs are transitioning into more "high-tech" positions, as machines are designed to take over certain tasks. There is a stereotype that individuals in the Region do not have the skills necessary for high-tech manufacturing. Despite this stereotype, people within the region are adapting and working to build these skills in an effort to retain these high-paid jobs.

In addition to the concerns regarding growing technology and worker skill gaps in rural environments, the experts also expressed concern about what "development" would look like in the future for Appalachia. With increasing urban sprawl in nearby areas, and the tendency to over-extract natural resources for quick money, preserving the area's natural endowments will need to be prioritized. One of the experts explained that traditional development is generally seen as building more strip malls and other infrastructure. Without the right environmental protections in place, too much of this type of

development could destroy the natural beauty and way-of-life of the Appalachian Region. The natural resources in the area are not only critical to the Region, but to the nation as a whole. Appalachia is one of the nation's largest and relatively undeveloped areas. Preservation of and national concern for this ecosystem will continue to increase as climate change starts to play a bigger role in the future economy. This may present economic opportunities to the Region in areas such as the carbon market, where revenue could be earned through some form of emissions trading, as is currently done in California and other areas around the world.

7.2.2 Target Industries and Sectors for the Appalachian Region

To best leverage the assets provided by rural areas, certain industries and job sectors may be more suitable targets of focused efforts to attract opportunity and investments. To address the challenges associated with rural communities in the Appalachian Region, this portion of the discussions with the various experts focused on identifying key industries that provide an advantage to rural communities and how they fit within global trends.

Key Industries and Sectors for Rural Communities

Experts explained that identifying key industries or sectors to target for investment is very difficult at the broad level of "rural areas," and depends on the specific characteristics and assets of each community. One expert noted that rural areas are likely to have a competitive advantage in industries that involve the extraction or consumption of natural resources, industries that require low-cost land or low-cost labor, or capital intensive industries that involve standardized production. The experts did identify some sectors that may be more suitable for rural areas, many of which are already being pursued by Appalachian communities, with a few new areas identified. The sectors include:

- **Shale gas fracking** While there is certainly money to be made from fracking, experts also brought up concerns. Like other types of energy production, fracking tends to be very cyclical, leading to a "boom and bust" growth situation. Additionally, the majority of jobs created from fracking are temporary, and often the higher-paying jobs do not go to local workers¹²². These jobs tend to be held by transient crews from within the oil and gas industry; the "indirect" jobs associated with the increased resource production, and often held by the locals, tend to be lower-paying service related positions. Communities where fracking takes place must also deal with the costs often brought on by the process, such as air, water, and noise pollution, road congestion and accidents, and possible road damage. Fracking is a controversial energy production method that has been banned by New York State.
- **Other forms of energy production.** While some areas in the Appalachian Region already mine coal and extract natural gas, there is some potential for alternative energy production, including wind and solar. Production of these alternative energy sources may help supplement the decline in coal mining.

¹²² <http://www.nofrackingway.us/2015/01/30/the-false-promise-of-local-fracking-jobs/>

- **Farming and food supply.** The abundance of land resources in the area naturally lend themselves to farming as a viable option for some rural communities. For those communities close enough to urban areas, there is an opportunity to supply agriculture to small-scale farmers markets and food co-ops.
- **Tourism and hospitality.** Given Appalachia's abundant natural resources and beauty, the Region should provide a great opportunity for tourism revenues. However, this will more likely be successful in areas that are better connected to more urban areas through the internet and good road systems.
- **Manufacturing.** This sector has always been important for much of the Appalachian Region, but today manufacturing jobs are diminishing. Despite the current decrease in manufacturing presence in the area, the industry may see a resurgence if more companies choose to locate in Appalachia. Areas of Ohio, Pennsylvania, and North Carolina have experienced success in attracting and retaining small and skilled manufacturing jobs by adapting to the high-skill market needs.
- **Services.** Key service industry opportunities include back office operational jobs such as information technology or accounting related jobs and financial services. Service jobs have been growing in Appalachia since the decrease in manufacturing jobs. Unfortunately, service jobs tend to pay less than manufacturing jobs. One expert highlighted financial services in particular as an area of opportunity for Appalachia to develop. Currently there are not enough institutions to provide sufficient financing in Appalachia. This gap could be filled through internet-based lending platforms such as the Lending Club. The lack of familiarity within the Region with these platforms also presents an opportunity for intermediary institutions, such as non-profits or financial institutions, to connect lenders to borrowers, and spread awareness of this new type of service.
- **Healthcare administration.** As more healthcare facilities open in rural Appalachia this sector presents more job opportunities. With targeted workforce training, some local residents could be eligible for other non-administrative jobs as well.
- **Retail.** Small and medium enterprises (SMEs) can sell products to local markets, but one expert pointed out that people in rural communities are not big consumers. Increased access to broadband within the Region can aid SMEs in connecting to the global market.
- **Ecological services.** As climate change continues to become a more pressing issue, there will likely be more opportunities in trading carbon or other greenhouse gas credits. With Appalachia's vast preserved ecosystem, the Region will be well-placed to offer these ecological services within and beyond the Region. If emissions limits are set, the Region would be well-positioned to sell excess emission credits to areas that exceed their allotment to generate revenue.

There was also discussion of how increasing access to broadband in rural communities could create jobs. There is a general perception that bringing broadband to an area will create great job opportunities for rural areas. However, one expert explained that broadband is more likely to create jobs when coupled with business agglomeration, which is difficult to do in rural areas. The presence of a broadband network is not a guarantee for job creation, but the absence of broadband infrastructure is prohibitive to future development. Even if broadband did open up jobs for the rural workforce, they would be lower-paid service and retail jobs, not high-tech, higher-paying jobs, like developing apps. Much of the rural Appalachian workforce does not have a large prevalence of high-level programmers that tech companies seek when choosing where to locate.

Over the past few years, there has been a shift in the types of industries employing people in Appalachia. Traditional manufacturing and coal mining jobs in the Region have diminished, while jobs in healthcare and other services sectors are increasing. Many of the industries and sectors identified by the experts have the potential to increase per-capita income in rural areas, though as previously noted the mining and fracking sectors are often cyclical, resulting in a sometimes unstable economy. Issues associated with the generally cyclical nature of resource extraction are further exacerbated by the decrease in coal mining employment in the region. Additionally, one expert pointed out that the ability of even higher-paying jobs to increase per-capita income is also highly dependent on state and national tax policies.

Key Industries for Rural Areas and Global Trends

The experts had a tendency to compare the industry growth trends in rural Appalachia to those in the United States, rather than globally. One expert did remark on the importance of the linkage between Appalachian rural markets and global markets, noting that the growth of the Region will depend on how well connected it can become to global markets.

Most experts agreed that there was a similarity between industry growth trends in rural Appalachia and those in the United States. One expert predicts that the decline of traditionally rural jobs such as mining and manufacturing will lead industry and sector trends in rural areas to become more similar to those in urban areas which are connected to the international market. Experts listed some specific sectors that have been trending positively both in rural Appalachia and at the national level. These include fracking, healthcare services, particularly those for the aging population, tourism, transportation, public utilities, government and other public sector jobs, and retail.

One expert pointed out that the general growth of the nation often comes at the expense of the Appalachian Region due to the exploitation of natural resource extraction. These resources are used to support the growth of the nation, but the Region does not reap the benefits as the resources are used elsewhere in the nation and related jobs, as seen in the steel industry, are shipped abroad rather than maintained in the Region or nation as a whole.

7.2.3 Measuring Success of Investments

The third key area of focus for discussion with the experts was the measurement of success of investments. The discussion covered criteria for measurement; measurement process, metrics and timing; risk and uncertainty in investments; and suggestions for best practices in performance measurement and tracking.

Rural Economic Investment Performance Measurement

During the interviews, experts remarked that ARC has done a good job of finding out the needs of rural communities and then making investments to try and address those needs. When asked about the best way to measure the success of economic development investment, experts spoke about two main types of improvements: improvements to the process of evaluating the success of investments, and improvements to the metrics used to measure this success.

Most experts acknowledged that it is difficult to improve the evaluation **process** considering ARC's constrained resources, though many agreed that ARC could do more to establish a direct link between the investments they provide and the successes seen in the Appalachian Region. If resources were not an issue, many experts mentioned that ARC should perform a type of quasi-experimental control study to identify, somewhat more confidently, whether or not ARC's intervention caused the observed change or if this was due to other factors. Alternatively, ARC should at least do a comparison study between the region that received the investment and a region that is similar on as many levels as possible that did not receive the investment.

One expert suggested ARC could also hire an external project evaluator to review and collect the data on its investments, rather than asking the grant recipients. This approach could potentially bring an additional level of consistency and credibility in data reporting and measurement.

Another expert pointed out the importance of considering, for each investment, the opportunity cost of that investment. That is, before the investment is made one should consider alternative project or program investment options to determine if the proposed investment is the best use of those funds.

Experts agreed that capturing jobs created is an important **metric**, but that the way it is measured could be revised. For instance, the metric could consider the per-capita income or median income associated with the job, benefits of the job, whether or not the job is full time, and who is getting the job (local residents or others).

While noting that job creation is an important metric, the experts agreed that simply looking at the number of jobs created from an investment does not capture the full success of these projects or programs, particularly since not all investments are designed to create jobs. For instance, one expert gave the example of one of ARC's smaller investments in an entrepreneur that allowed this young man to participate in a business competition. The investment was successful but did not create any jobs as this was not its intention.

There was also consensus that there should not be a standard set of indicators for all ARC investments. Instead experts recommended constructing a unique set of indicators for each investment that would be agreed on by all involved parties at the beginning of

the project. Experts did suggest some general metrics or categories to be measured that ARC could consider when selecting the metrics for a project, some of which are already being tracked. These metrics include:

- Growth in household income;
- Growth in gross state product;
- Total income generated without jobs (for instance, investing in conserving the Appalachia's natural resources will generate income for the region, though not through jobs);
- Amount of small business development;
- Level of entrepreneurial culture;
- Business creation; and
- The link between an ARC investment and a specific strategic growth plan for a rural area.

The link between ARC investment and growth plan speaks to ARC's overarching goal of improving local capacity in the Region, indicating the level to which regions are becoming more self-sustaining while also encouraging future strategic planning.

One expert pointed out the need to capture more intermediate input and output metrics. For instance, when ARC invests in a workforce training program, the program should capture how many people attended the training, how many people completed the training, how many jobs were created, and how long the jobs were retained. The implementation of a robust system of metrics and frequent data tracking will make evaluations easier.

Another expert suggested a focus on the secondary or "follow-on" effects from ARC investments, such as additional new manufacturing plants locating in a town due to the success of a plant that received funding assistance. In this instance, ARC would count the jobs created directly by the first plant, as well as those jobs created by the additional follow-on plants. This captures how well ARC is able to leverage its funds to create a real difference in the region.

Finally, there was a general consensus that more qualitative measures should be tracked. Because ARC engages in so many programs that do not lend themselves to quantitative measurements, including building institutional capacity, qualitative data should be collected to supplement the quantitative measures. These can be in the form of surveys and interviews that capture general opinion of the program or project, and any quality of life improvements it may have created for those in the sample.

Timing of Performance Measurement

Experts agreed that the amount of time required to realize a program's full impact depends on the type of investment and thus performance measurement timelines should also be project or program specific. Experts generalized that the impacts of investments in entrepreneurship and small business development will likely be realized within two to five years of funding. Infrastructure investments can take 10 to 20 years before benefits can be realized, given the time required for construction, and the time it takes people to

start using the asset, such as a road connecting a previously isolated rural area to a more urban area. Finally, investments in education and other social change programs can take a generation or more before impacts are fully realized.

Regardless of the time it takes to realize the full impacts of an investment, many experts recommended checking in on the progress of an investment every one to two years. Experts acknowledged the burden of data collection and ARC's limited resources, but still emphasized the importance of periodically checking in on investments. Experts noted that if you wait to check in until the program is near completion, then it is often too late or too expensive to make a significant change in the program. Checking in periodically allows the program administrator the opportunity to make changes and still have an effective program. Experts recommended that ARC implement a standardized check-in process where first a preliminary assessment of all the investments is made, and then a more in-depth investigation is made only for those investments that stand out as either not making progress or progressing far above target. Another suggestion was to increase the public participation process for implementation and allow a community process to adapt to changing needs during the program investment to improve the final product. Making changes in response to program feedback could help tailor a more effective product and better target future investments.

Program Management and Investment Selection

The likelihood for an investment to succeed depends greatly on the context of that particular region, and the needs of its people. Some experts noted that investments in infrastructure may be more likely than others to achieve a large "bang for the buck." One expert noted that it is often not wise to only make one type of investment, and noted that ARC has done well with spreading investments around to different types of programs and areas within the Region. The experts also agreed that ARC has done a good job of checking in with the people in rural Appalachian communities to assess their needs before investing in a project.

Experts also found it difficult to assess whether different types of investments are more difficult to manage. They noted that difficulty in management depends on the specific investment type and context. This same principle applied to determining "risky" investments. A few experts agreed that entrepreneurship programs were likely to be more risky investments, due to difficulty predicting which companies will or will not succeed. One expert posited that it is probably less risky to support entrepreneurs that supply to local demand, rather than local firms that serve external markets.

Education programs and workforce training were given as examples of less risky investments. One expert noted the importance of having local investors as they tend to have an interest in the well-being of the Region and will search for innovative methods to make an investment work rather than pulling out at the first sign of trouble. Overall, the consensus seemed to indicate that ARC would be well served to continue investing in a diverse set of projects to minimize risks and maximize impacts.

7.2.4 Role of Funders in Appalachian Economic Development

A subset of the experts were asked questions regarding the role of funders in Appalachian economic development. The questions centered on the role of public and

private organizations in rural economic well-being and whether these roles have changed in recent years. The experts all noted that they did not foresee a time when public support would not be necessary in rural regions.

Experts agreed that both public and private entities have an important role to play in fostering economic development in these rural communities. After the public sector lowers barriers to entry in markets, and builds public assets, the private sector brings business to the communities, creating a complementary relationship between the two types of entities. One expert specified that it is the role of both types of entities to build two key assets: infrastructure and networks. Networks can be anything from links to sources of financing, to relationships among local and external institutions.

One expert highlighted that philanthropic organizations have been disappearing, at least in part due to society's focus on total impact numbers. It is more popular politically to support programs and investments that will help more people. The problem is that rural areas are intrinsically spread out with small populations. Thus the impact numbers for rural investments cannot compete with those in urban areas despite the ability for investment in a small rural area to impact an entire community as opposed to a small subset.

One expert noted that the roles of funders have changed over time as philanthropic entities who once focused on providing funding and networks to rural communities have shifted to providing top-down planning and problem solving. This expert warned this was taking decision making away from the people living in the rural areas, and giving more influence to people living removed from the rural issues. This shift has increased the importance of ARC as a critical resource for keeping funders informed of the needs of rural communities.

7.3 Findings and Recommendations

The findings from the interviews with development experts can be used to help guide ARC forward in its future program investments. All development experts commented on their respect for ARC and all that it has done for the Region. The expert feedback is meant to advise ARC on the types of investments to make going forward, what challenges to try and address, and how ARC can better capture and report the success of its programs. The following section summarizes some of the main recommendations and findings.

One recommendation that came from these expert interviews was that **ARC should focus on supporting local leadership to promote long term stability and growth of the Region**. Despite the challenges associated with allocating funding toward programs such as the building of civic capacity, that are difficult to measure and often intangible, this is a very necessary area to focus in order to implement a long-term development plan to move the region forward. There are currently no long term protections for the environment, and no way for long-term projects to be coordinated. Considering that experts also suggested implementing more qualitative measures for tracking the success of ARC investments, this could provide another option for building support for civic capacity investments.

Having strong local leadership could also help address the other two key challenges identified: well-paid, stable jobs for the future, and the lack of public funding in rural

areas. Local leaders could champion their needs in an organized manner to secure more government funding. And with a development plan in place, there will be tangible projects for public funds to go towards.

The findings from the interviews indicate that there is **no general roadmap for making good investments in rural communities** and no easy solution to finding the industry investments that provide the biggest “bang for the buck.” Each investment must consider the needs and challenges of that particular area, there is no one industry or one type of investment that is generally best to help rural communities.

Experts did not identify any revolutionary sectors in which the Region could specialize. Industries that have traditionally existed in rural areas – including energy production, farming, tourism, manufacturing, services, and retail – will likely continue to persist in the Region. **Although broadband and shale oil fracking have recently surfaced with the potential for new jobs in the Region, neither industry is expected to provide a transformative or sustainable improvement for Appalachia.** Jobs brought in through broadband connections are still likely to be low-wage service positions, and the mere presence of broadband does not guarantee an increase in jobs. Shale-drilling tends to come loaded with costs as well as benefits, and offers only a “boom and bust” type of economic growth, and thus should not be an economy’s primary source of revenue.

With the loss of well-paid manufacturing jobs in many Appalachian communities, **ARC should focus investment on training the workforce to take on some of the higher-skilled jobs within the industries available**, including healthcare. To avoid Appalachian workers taking the first-available low-skilled positions, ARC could support the implementation of targeted training programs to help local Appalachians apply for higher-paid positions. Another budding industry for Appalachia is likely to be ecological services. ARC should start considering now how to prepare the Appalachian Region to trade in the carbon market.

Another point made during the expert interviews was the **need to change the way rural workers are trained**. As technology continues to progress at an exponential rate and increasingly jobs are being replaced or enhanced by new technology, workers will no longer be able to simply learn one skill and practice that skill for their rest of their career. Instead, workers will need to adapt to become life-long learners. Similarly, workforce training programs will need to adapt to provide guidance on this continuous learning path.

The greatest amount of time during the discussions with experts focused on **how ARC should measure the success of its investments**. There was general consensus that job creation should not be the only indicator used to measure the success of an ARC investment, with general metrics such as growth in household income and level of entrepreneurship in the culture as potential additions. The experts suggested that a unique set of indicators should be selected for each investment, due to the wide variation in types and categories of investments. More qualitative measures of success are also needed to capture much of ARC’s “soft” investments, such as built civic capacity, which are not easily quantified.

Experts also suggested increasing the robustness of the process for measuring project impacts, performing quasi-experimental and randomized control studies to isolate ARC’s impact on the Appalachian Region. However, **many of these changes are quite costly**,

and thus may be counter-productive. Given the limited resources available to ARC, diverting funds to measure the successes rather than funding productive investments may actually be detrimental to the Region. Several experts agreed that though the results would be very useful, embarking on a quasi-experimental or randomized control study would be quite costly given ARC's limited resources.

However, there may be some efforts ARC could take to create a **more robust data collection process.** For instance, some experts suggested ARC implement a standardized process for collecting, measuring, and regularly reporting (annually or biennially) the impact data on each investment. This process could be done by an outside data expert, or it could be taught to each grant applicant.

While experts agreed there are some types of investments, such as small business development programs, that can achieve impacts within the first five years, there are also many others that can easily take 10 to 20 years, such as education or infrastructure investments. When the investment is first made and the success metrics are developed, the expected impact timeline should be written down. This will also hopefully help avoid political pressures for each investment to produce results every two years.

Finally, experts pointed out that government funding to Appalachia has been severely diminishing over time. Both government and the private sector have a role to play in supporting the Appalachian Region, and neither has been providing adequate support in the recent past. Perhaps fostering local leadership and strategic development plans will help in this effort to attract more public and private funds to meet the needs of the Region well into the future.

8 Study Findings and Recommendations

The Appalachian Regional Commission has four main goals, as laid out in the 2011-2016 Strategic Plan:

1. Increase job opportunities and per capita income in Appalachia to reach parity with the nation.
2. Strengthen the capacity of the people of Appalachia to compete in the global economy.
3. Develop and improve Appalachia's infrastructure to make the Region economically competitive.
4. Build the Appalachian Development Highway System to reduce Appalachia's isolation.

The performance of ARC's job creation and retention investments is closely related to these goals, particularly the first two, and this program evaluation intends to assess the performance and economic impacts of these investments between FY 2004 and FY 2010. In addition, the evaluation offers insight into ways that ARC can enhance its ability to document and report program impacts, as well as assess potential industries or improvements to target to help improve rural areas in the Region.

8.1 Key Findings

This job creation and retention program evaluation examined the impact of grant investment on income, employment opportunities, job creation and retention, and businesses created, retained and served. The evaluation consisted of both quantitative and qualitative outcomes of the investments to gauge the overall performance of the projects. A review of initial ARC grant information, a survey, and interviews with grant recipients all inform the analysis.

At the time of grant award, information about the grant amount, its purpose, potential impacts, and other factors is collected and documented in the ARC.net database. Business/Training grants accounted for the largest number of grants, both in terms of actual awards and valuation of funding. This finding is consistent between the ARC.net database and the survey responses. Part of this volume is accounted for by the seven Enterprise Development Programs, each of which were funded annually during the study period. Enterprise Development Programs accounted for nearly 42 percent, \$17.8 million of the \$42.5 million, in grants awarded during this time period.

The survey results show that overall, grant recipients seemed to underestimate some of the impacts of their project. This was also true when looking at the outcomes noted in the ARC.net database. Particularly, both the responses at the time of project closeout and the survey responses indicated that respondents underestimated job creation, businesses served and improved, and leveraged private investment. Business/Training projects generated the most benefit in each category measured – job creation, job retention, businesses served, businesses retained, and leveraged private investment. This finding is somewhat unsurprising, as each there were between 19 and 21 responses for Business/Training projects, depending on metric, while the number of responses from

other categories ranged from four to nine. The survey responses indicated that a large portion of the outcomes and outputs were attributable to the Enterprise Development Programs.

In addition to the quantitative outputs and outcomes, some qualitative measures were also considered in the survey. Respondents could select multiple beneficiaries when they completed the survey, and their responses suggest that most of the projects benefited businesses, entrepreneurs and/or non-profit organizations. Sixty-one percent of respondents indicated that the primary goal of their project was business assistance. Approximately one-quarter of projects had a goal of attracting visitors and eighteen percent to promote arts and culture.¹²³ A majority (55 percent) of survey respondents indicated that their project outcomes were either entirely (10 percent) or mostly (45 percent) attributable to ARC's funding. Eight-six percent of respondents indicated that without ARC funding, their project would not have been undertaken (44 percent) or would have been done on a smaller scale (42 percent). These results highlight the importance of these grants to achieving both the program's intended local goals and ARC's larger strategic goals.

Beyond to the survey and the case studies, the team also held several discussions with rural policy experts in an effort to provide context to the past program investments and gain insight for investments going forward. These discussions showed that the challenges facing rural Appalachia include a lack of leadership and jobs, and decreasing investment. Discussions also included potential target industries to help achieve the goal of bringing parity to the region. Among others, identified industries included: energy production; farming and food production; tourism and hospitality; manufacturing; and services. Many of the grants that ARC awarded during the FY 2004 to FY 2010 period were in support of these identified target industries. Continued focus on these industries could help the region continue to move forward.

Survey respondents, case study participants, and policy experts all indicated that measuring success can be costly and difficult. They noted that the process and metrics can be improved to provide better information and potentially optimize outputs.

The team identified four key "lessons learned" based on the survey analysis, case studies, and policy discussions. These may help the Commission and future grantees best leverage available funding to achieve their individual and collective desired outcomes.

- Engage, educate and involve the community
- Change is good – be flexible
- Mind your measures
- Fine-tune the grant process

¹²³ Note that respondents could choose more than one primary goal.

8.2 Recommendations

The recommendations provided below are based on the survey results, the case studies and feedback from the policy interviews. They are intended to both improve the quality of the data utilized in ARC program evaluation and the data collection process itself.

Improve the data collection and tracking process. Despite thorough efforts at gathering data for these projects, the team was able to collect data for fewer projects than desired. In addition to difficulty tracking some grantees, many of those individuals contacted did not have data on the measured outputs and outcomes. Over the course of nearly 10 years, some of the grant recipients had previously collected this information but no longer had the records. Others simply did not track the outputs and outcomes.

Given the high priority of tangible, measured improvements to job opportunities and other measures of competitiveness, it is in the best interest of ARC to require tracking for reporting purposes. Tracking of the performance metrics that are deemed most important to ARC should be required. It is important not to penalize grant recipients should factors outside their control result in a lack of expected performance, but tracking and measuring these outputs and outcomes will help improve ARC's project prioritization and best utilize limited funds into the future. Informing the Local Development Districts of the importance of collecting and maintain performance metrics may be a first-step to improving overall data collection.

Clarify and specify measurement metrics and timing. Grant recipients and rural policy experts agreed that tracking and measurement of project outcomes was difficult and needed improvement. They suggested that ARC implement a standardized process for collecting, measuring, and regularly reporting the impact data on each investment. This can either be done by an outside resource or by grant applicants educated on the tracking and measurement process desired by ARC. At present, there is some confusion about the exact nature of each metric and how it should be measured and tracked.

Several additional metrics were suggested to supplement the standard job creation measures, including growth in household income and level of entrepreneurship in the culture. More qualitative measures of success are also necessary, as there are many "soft" outcomes, such as civic capacity, that are very important to communities but are not easily quantified. Rural policy experts suggested customizing the indicators for each project type, due to the wide variation in types and categories of investment.

The time period for outcomes also varies by project type, with some investments such as education programs, taking a longer period to reach their full impact. The tracking and measurement process should account for this.

Collect additional information related to funding sources. In many cases, ARC funds are not the only source of capital for these projects. Gaining a better understanding of all funding required to implement a project, as well as the sources of these funds, could provide useful insight to ARC. Understanding differences in funding sources and options for various job creation and retention programs may help target and prioritize future investments. Additionally, tracking detail on leveraged private investment may be useful for other potential project investments where a variety of funding sources are more available. This may free some of ARC's limited available resources for those high-impact projects with more limited access to other funding sources may help ARC best utilize the

limited available resources. A better understanding of the complete funding picture may be informative to ARC as future investments are considered.

Consider targeted investment and focus on key growth industries. Focusing some grant resources on potentially high-growth, high-paying industries within the region could lead to long-term gains in overall quality of life. The decline of coal mining has led to a reduction in high paying jobs in many parts of the Region. Focus on clean energy industries and other high-growth potential industries may help provide well-paying jobs for area residents while potentially reducing some of the “brain drain” that the region has experienced.

Increase focus on workforce training. Increase focus on both general workforce training and the means by which workers are trained. A focus on investment in workforce training for some higher-skilled jobs within existing and targeted industries, including healthcare and ecological services, could help increase per capita income in the Region. The way that workers are trained should also be examined. The rapid nature of technological improvements requires constant learning. Workforce training programs should provide guidance on continuous learning to best prepare area workers for long-term employment.

Support local leadership. One key to continued success in the region is an increased focus on leadership within the rural communities. Supporting local leadership can help promote long-term stability and growth in the Region. This support can help foster civic capacity investment and environmental protections in the longer-term. Strong local leadership may also help address two key challenges – access to well-paid, stable jobs and a lack of public funding in rural areas. Development plans and local leadership could provide rural areas with champions who can organize in an effort to secure additional funding.

Consider additional assistance or resources for program administrators. Feedback has indicated that the grant writing and tracking process can be burdensome to recipients. Several agencies noted that they had forgone potential funding for new projects due to the time and effort required in the grant writing process. Though it has the potential to be costly and divert resources from actually funding projects and programs, additional support or resources both during the grant writing process and during the monitoring of grants would be beneficial to grantees. Many of these rural communities are strapped for resources, and the time required to plan and monitor a grant is often be cumbersome. Providing additional resources may contribute to greater long-term success, as well as better data collection and performance monitoring.

Appendix 1 - Survey

Appalachian Regional Commission Program Evaluation of Job Creation and Retention Projects Questionnaire

May 2014

This short questionnaire should not take more than 20 minutes to complete. All information will be aggregated prior to release. Your responses will be kept confidential.

The results of this questionnaire will help the Appalachian Regional Commission fulfill its mission to promote economic development in the region, and assist current and future grantees with improving project performance measurement. If you have any questions, please contact Chris Mongelli (617-603-6352 or christopher.mongelli@hdrinc.com) or Julie Marshall (202-884-7790 or jmarshall@arc.gov). Thank you very much for participating.

Section A: Background Information

1. In order to track responses and enable us to follow-up with you, we ask that you provide your contact information.

- Name of person completing this questionnaire
- Organization
- Address
- City
- State
- Zip
- Phone
- Email
- Website

2. What was the ARC project title?

3. What was the ARC project ID (for example, AL-12345)?

4. This project primarily benefited (select all that apply):

- Households
- New businesses
- Existing small to medium-sized businesses
- Business / industrial park(s)
- Entrepreneurs
- Youth
- Residents
- Government officials
- Non-profit organizations
- Conference attendees
- Downtown district
- Public services
- Researchers
- Students
- Policy makers

- Healthcare providers
- Future ARC projects
- Other (please specify)

5. The primary goal(s) of the project include (select all that apply):

- Business assistance
- Attracting visitors
- Promoting arts and culture
- Environmental preservation
- Developing energy industries
- Improving energy efficiency
- Supporting local food production and sales
- Other (please specify)

6. Based on the following definitions, how would you classify the project?

- Local Food:** A project that aims to start or develop a farm or a business, incubator, etc. in the agriculture or culinary fields.
- Child Care / Education:** A project that builds or expands a school, designs a new class or curriculum, sets up a day care, or benefits children or students in some other way.
- Community Building / Tourism:** A project that looks to enhance communities through building, renovating or marketing tourist attractions or fixing associated infrastructure.
- Energy / Environmental:** A project that looks to build a power plant, improve energy efficiency, or protect the environment.
- Planning / Research:** A project that looks to develop a plan, possibly associated with one of the other categories, or conduct some form of research.
- Business / Training:** A project that creates a business or incubator for an industry not listed in other categories a-e above. This type of project may also involve training employees or adults that are not considered students.
- Other:** Please describe.

Business / Training Projects

Additional activities undertaken by this project include (check all that apply):

7. Basic Education / Training / Instruction:

- Provided general education
- Provided computer skills training / instruction
- Provided occupational / job skills training / instruction
- Provided basic education to adults
- Provided training in how to use project-purchased equipment
- Provided instruction in business management
- Provided pedagogy or teaching skills training to teachers
- Provided economic development or leadership workshop for locally elected officials
- Provided mentoring program for high school students
- Hiring an intern for administrative work
- Hiring an intern to help with research
- Giving experience to a student research assistant
- None of the above

n. Other (please specify):

8. Educational Resources:

- a. Installed science lab or other special use classroom equipment
- b. Developed/purchased computer-based educational materials
- c. Established a community website
- d. Developed/purchased paper-based educational materials
- e. Developed/purchased teacher training program/materials
- f. Developed/purchased instructor or teacher manuals/curriculum
- g. Developed/purchased student manuals/materials
- h. Developed proficiency standards (e.g. to align with industry standards)
- i. Developed education program (e.g. performing arts, mentoring, etc.)
- j. Developed resource directory for locally elected officials
- k. None of the above
- l. Other (please specify):

9. Community Outreach:

- a. Provided community outreach activities
- b. Established community or business partnerships
- c. Distributed funds/mini-grants
- d. None of the above
- e. Other (please specify):

10. Community Capacity:

- a. Development or implementation of a strategic plan
- b. Programs that promote citizen empowerment
- c. Aid in implementing outcome-based community or economic development activity
- d. Community asset mapping
- e. Community-based environmental clean-up project
- f. Self-help infrastructure project
- g. None of the above
- h. Other (please specify):

11. Organizational Capacity:

- a. Staff and board development for non-profit or community organization
- b. Strategic planning for community based organization
- c. Fundraising or grant writing training for non-profit employees
- d. Establish a community development foundation
- e. Technical assistance to establish a regional heritage tourism network
- f. None of the above
- g. Other (please specify):

12. Job Assistance and Career Counseling:

- a. Provided college counseling
- b. Provided career counseling (e.g. discussions, diagnostic/aptitude testing)
- c. Provided job search/placement assistance (e.g. job bank, employer outreach)
- d. Provided employability skills (e.g. work attitudes/habits)
- e. None of the above
- f. Other (please specify):

13. Social Support Services:

- a. Provided assistance arranging transportation
- b. Provided financial assistance
- c. Provided health, therapeutic, or developmental assistance
- d. Provided referrals to other agencies for social support services
- e. None of the above
- f. Other (please specify):

14. Technical Assistance:

- a. Assist businesses in developing marketing strategies
- b. Implement technology transfer program
- c. Facilitate business training course
- d. Work with potential entrepreneurs to develop business plan
- e. Provide expertise in areas of finance or accounting
- f. None of the above
- g. Other (please specify):

15. Business Site Development:

- a. Extend water/gas/sewer services to business site
- b. Extend telecommunications services to business site
- c. Reuse of existing brownfield
- d. Construction or rehabilitation of building
- e. None of the above
- f. Other (please specify):

16. Business Incubation:

- a. Construction of business incubation building
- b. Management and/or operations of incubation building
- c. Incubation for manufacturing businesses
- d. Incubation for service industries
- e. Incubation for food related businesses
- f. Incubation for arts related businesses
- g. Incubation for a variety of industries
- h. None of the above
- i. Other (please specify):

17. Entrepreneurship Education:

- a. K – 12
- b. College
- c. Adult
- d. None of the above
- e. Other (please specify):

18. Export Development:

- a. Trade show assistance
- b. Export readiness training
- c. International market research
- d. Inbound trade missions
- e. Commercial service 'Gold Key' service
- f. None of the above
- g. Other (please specify):

19. Access to Capital:

- a. Development venture capital funds
- b. Revolving loan funds
- c. Micro credit funds
- d. None of the above
- e. Other (please specify):

20. Please use this box to provide any additional information, including: data sources; estimation methods; or anything else that may be relevant.

Section B: Project Outputs

What specific results (*outputs*) were actually achieved by this project? These questions attempt to capture the characteristics, capacity and direct outputs of the job creation and retention project. Depending on your project timeframe, include **CUMULATIVE** outputs up to 3 years after project closeout.

In the Output column, please provide a **numerical** estimate. If you did not track information for a specific output, please enter “**DNT**” in the corresponding box in the Output column (*e.g., you do not have information about the number of households served*). If an output is not applicable to your project, please enter “**NA**” in the corresponding box in the Output column (*e.g., your project did not provide services to households*).

Use the definitions provided below to determine how a given output should be expressed.

DEFINITIONS:

Outputs: Measures of a program's activities

Households Served: The cumulative total number of households that are served by your ARC project, from project inception until now.

Businesses Served: The cumulative total number of businesses that are served by your ARC project, from project inception until now.

Organizations Served: The cumulative total number of organizations that are served by your ARC project, from project inception until now.

Communities Served: The cumulative total number of communities that are served by your ARC project, from inception until now.

Visitors Served: The number of new visitors to a destination resulting from an ARC investment.

Students Served: The total number of students served by the ARC project. For example, the number of students enrolling in a new community program the year of the project and for three years after.

21. Group Outputs:

Output

Households Served

Businesses Served

Organizations Served

Communities Served

Visitors Served

Students Served

22. List any other outputs that were measured or evaluated (if no other outputs were measured, enter "NA" into the box): _____

23. Please use this box to provide any additional information, including: data sources; estimation methods; whether or not outputs vary over time; or anything else that may be relevant (if there is no additional information, enter "NA" into the box).

Section C: Project Outcomes

Please provide the following information about final project achievements and results.

These questions attempt to capture the **direct** outcomes of the project. Depending on your project timeframe, include CUMULATIVE outcomes for 3 years after project closeout.

In the Outcomes column, please provide a **numerical** estimate. If you did not track information for a specific outcome, please enter "**DNT**" in the corresponding box in the Outcomes column. If an outcome measure is not applicable to your project, please enter "**NA**" in the corresponding box in the Outcomes column.

In the Year(s) column, please indicate the **number** of years for which the outcome measure was tracked.

Use the definitions provided below to determine how a given outcome should be expressed.

DEFINITIONS:

Outcomes: Changes that result from the activities

Households Improved: The cumulative total number of households with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the "Households Served" output measure.



Businesses Improved: The cumulative total number of businesses with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Businesses Served” output measure.

Organizations Improved: The cumulative total number of organizations with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Organizations Served” output measure.

Communities Improved: The cumulative total number of communities with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Communities Served” output measure.

Jobs Created: The total number of (1) direct hires made as a result of the project’s operation (e.g. teachers hired, public safety, etc.); and (2) direct private sector jobs created following the delivery of ARC-funded services or project completion. This does **NOT** include construction jobs to build the ARC funded project. *In the case of part-time jobs, please convert these to full-time equivalent and round up to report whole numbers.*

Jobs Retained: The total number of jobs that would be lost or relocated without the ARC-funded project. Existing jobs benefiting from an infrastructure upgrade or other ARC-funded project should not be counted as “Jobs Retained.”

Businesses Created: The total number of businesses that located in the region as a direct result of the ARC-supported project within three years of the project end date.

Businesses Retained: The total number of existing businesses that remained in the region due to the ARC-supported project.

Leveraged Private Investment (LPI): The total dollar amount of private sector financial commitments and investment that were **not** part of the project funding, but followed as a result of the completion of the ARC project.

Revenues Increased (non-export): The total dollar amount of any increase in non-export (domestic) sales that occurred among businesses as a result of the ARC project.

Revenues Increased (export): The total dollar amount of any increase in export (international) sales that occurred among businesses as a result of the ARC project.

Costs Reduced: The total dollar amount of costs reduced as a result of the ARC project activities, within one year of project implementation. For example, small business technical assistance may help a business streamline and cut costs, or an energy efficiency program may help to reduce energy costs.

24. & 25. Group Outcomes:

	Outcomes	Year(s)
Households Improved	<input type="text"/>	
Businesses Improved	<input type="text"/>	
Organizations Improved	<input type="text"/>	
Communities Improved	<input type="text"/>	

26. & 27. Economic Outcomes:	Outcomes	Year(s)
Jobs Created	<input type="text"/>	
Jobs Retained	<input type="text"/>	
Businesses Created	<input type="text"/>	
Businesses Retained	<input type="text"/>	
Leveraged Private Investment (\$)	<input type="text"/>	
Revenues Increased (non-export, \$)	<input type="text"/>	
Revenues Increased (export, \$)	<input type="text"/>	
Costs Reduced (\$)	<input type="text"/>	

28. In what industries were the jobs created or retained? Please add a quantified number of jobs for each affected industry.

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation Utilities
- Wholesale
- Retail
- Finance, Insurance or Real Estate
- Services
- Other

29. List any other outcomes that were measured or evaluated: _____

30. Please provide relevant information about how the outcome measures were calculated such as data sources used or key assumptions.

Section D: Other Impacts of ARC Funding

31. To what extent are the estimated outcomes attributable to the ARC intervention and funding?

- a. Entirely
- b. Mostly
- c. Somewhat
- d. Slightly
- e. Too difficult to determine



32. What do you think would have happened to the project if ARC funding had not been available?
 - a. Would have been completed with other funds in approximately the same time period
 - b. Would have been delayed for up to a year
 - c. Would have been delayed for a year or more
 - d. Would have been completed on a smaller scale
 - e. Would not have been undertaken
33. Aside from the direct jobs and investment associated with the project, were there any other positive or negative economic impacts on the community? If so, please explain and quantify if possible.
34. Did the project help attract any additional government or philanthropic funding? Please describe.
35. Please describe any private investment not directly related to the project that occurred as a result of the project.
36. Please provide any additional comments on the project in terms of accomplishments, challenges, or other relevant information to help with the program evaluation.

Section E: Long-Range Impacts

Using the measures below, please rate the long-term impact of your project on the economy, the environment, and the quality of life in your community.

DESCRIPTION OF CHOICES:

None: Project had little to no impact on the measure's current trend

Slight: Project impact was not large enough to reverse or stabilize the measure's current trend

Moderate: Project impact contributed to the stabilization or reversal of the measure's current trend

High: Project impact was responsible for significant improvement in the measure's current trend

37. Economic Measures

None Slight Moderate High

What impact did this project have on:

Attracting new residents or stabilizing the area's population

Attracting new jobs or increasing employment at existing businesses

Creating new sources of income or increasing income for local residents

Increasing local business sales or the value of business assets (such as equipment, real estate)

Increasing the value of household assets (such as homes, land, farms) for local residents

Increasing the value of community assets (such as community buildings, schools, infrastructure, parks)

Other economic measures (please specify):

38. Competitiveness Measures

None Slight Moderate High

What impact did this project have on:

Improving the stability and sustainability of the local economy
Improving the efficiency of business operations or public services
Improving the productivity of students, employees, businesses, land, or other assets
Improving the skill level of the workforce
Increasing the viability of local businesses
Improving access to markets for local products, businesses, artisans, and entrepreneurs
Reducing the cost of doing business
Other competitiveness measures (please specify):

39. Environmental Measures

None Slight Moderate High

What impact did this project have on:

Improving air or water quality
Improving quality and/or access to land and natural resources
Waste reduction or improving waste management (reuse, recycling, alternative energy, biofuels)
Improving energy security and independence
Increasing energy efficiency or conservation
Other environmental measures (please specify):

40. Quality of Life Measures

None Slight Moderate High

What impact did this project have on:

Improving access to culture, arts, historic sites, and other amenities
Improving civic life and governance
Improving public health, safety, or well-being
Improving public services & institutions
Increasing recreational opportunities
Improving the diversity (age, gender, race, ethnicity, economic status) of the population
Increasing knowledge and educational levels of the population
Other quality of life measures (please specify):

Thank you very much for participating in the Appalachian Regional Commission Program Evaluation survey. If you have any questions, please contact Chris Mongelli at christopher.mongelli@hdrinc.com or 617-603-6352.

Appalachian Regional Commission Program Evaluation of Job Creation and Retention Projects Questionnaire May 2014

This short questionnaire should not take more than 20 minutes to complete. All information will be aggregated prior to release. Your responses will be kept confidential.

The results of this questionnaire will help the Appalachian Regional Commission fulfill its mission to promote economic development in the region, and assist current and future grantees with improving project performance measurement. If you have any questions, please contact Chris Mongelli (617-603-6352 or christopher.mongelli@hdrinc.com) or Julie Marshall (202-884-7790 or jmarshall@arc.gov). Thank you very much for participating.

Section A: Background Information

- 1. In order to track responses and enable us to follow-up with you, we ask that you provide your contact information.**
 - Name of person completing this questionnaire
 - Organization
 - Address
 - City
 - State
 - Zip
 - Phone
 - Email
 - Website
- 2. What was the ARC project title?**
- 3. What was the ARC project ID (for example, AL-12345)?**
- 4. This project primarily benefited (select all that apply):**
 - Households
 - New businesses
 - Existing small to medium-sized businesses
 - Business / industrial park(s)
 - Entrepreneurs
 - Youth
 - Residents
 - Government officials
 - Non-profit organizations
 - Conference attendees
 - Downtown district
 - Public services
 - Researchers
 - Students
 - Policy makers
 - Healthcare providers
 - Future ARC projects
 - Other (please specify)

5. The primary goal(s) of the project include (select all that apply):

- a. Business assistance
- b. Attracting visitors
- c. Promoting arts and culture
- d. Environmental preservation
- e. Developing energy industries
- f. Improving energy efficiency
- g. Supporting local food production and sales
- h. Other (please specify)

6. Based on the following definitions, how would you classify the project?

- a. **Local Food:** A project that aims to start or develop a farm or a business, incubator, etc. in the agriculture or culinary fields.
- b. **Child Care / Education:** A project that builds or expands a school, designs a new class or curriculum, sets up a day care, or benefits children or students in some other way.
- c. **Community Building / Tourism:** A project that looks to enhance communities through building, renovating or marketing tourist attractions or fixing associated infrastructure.
- d. **Energy / Environmental:** A project that looks to build a power plant, improve energy efficiency, or protect the environment.
- e. **Planning / Research:** A project that looks to develop a plan, possibly associated with one of the other categories, or conduct some form of research.
- f. **Business / Training:** A project that creates a business or incubator for an industry not listed in other categories a-e above. This type of project may also involve training employees or adults that are not considered students.
- g. **Other:** Please describe.

Child Care / Education Projects

Additional activities undertaken by this project include (check all that apply):

7. Educational Resources:

- a. Installed science lab or other special use classroom equipment
- b. Developed/purchased computer-based educational materials
- c. Established a community website
- d. Developed/purchased paper-based educational materials
- e. Developed/purchased teacher training program/materials
- f. Developed/purchased instructor or teacher manuals/curriculum
- g. Developed/purchased student manuals/materials
- h. Developed proficiency standards (e.g. to align with industry standards)
- i. Developed education program (e.g. performing arts, mentoring, etc)
- j. Developed resource directory for locally elected officials
- k. None of the above
- l. Other (please specify):

8. Social Support Services

- a. Provided assistance arranging transportation
- b. Provided financial assistance
- c. Provided health, therapeutic, or developmental assistance
- d. Provided referrals to other agencies for social support services
- e. None of the above
- f. Other (please specify):

- 9.** Please use this box to provide any additional information, including: data sources; estimation methods; or anything else that may be relevant.

Section B: Project Outputs

What specific results (*outputs*) were actually achieved by this project? These questions attempt to capture the characteristics, capacity and direct outputs of the job creation and retention project. Depending on your project timeframe, include **CUMULATIVE** outputs up to 3 years after project closeout.

In the Output column, please provide a **numerical** estimate. If you did not track information for a specific output, please enter “**DNT**” in the corresponding box in the Output column (*e.g., you do not have information about the number of households served*). If an output is not applicable to your project, please enter “**NA**” in the corresponding box in the Output column (*e.g., your project did not provide services to households*).

Use the definitions provided below to determine how a given output should be expressed.

DEFINITIONS:

Outputs: Measures of a program's activities

Households Served: The cumulative total number of households that are served by your ARC project, from project inception until now.

Businesses Served: The cumulative total number of businesses that are served by your ARC project, from project inception until now.

Organizations Served: The cumulative total number of organizations that are served by your ARC project, from project inception until now.

Communities Served: The cumulative total number of communities that are served by your ARC project, from inception until now.

Visitors Served: The number of new visitors to a destination resulting from an ARC investment.

Students Served: The total number of students served by the ARC project. For example, the number of students enrolling in a new community program the year of the project and for three years after.

10. Group Outputs:

Output

Households Served

Businesses Served

Organizations Served

Communities Served

Visitors Served

Students Served

11. List any other outputs that were measured or evaluated (if no other outputs were measured, enter "NA" into the box): _____

12. Please use this box to provide any additional information, including: data sources; estimation methods; whether or not outputs vary over time; or anything else that may be relevant (if there is no additional information, enter "NA" into the box).

Section C: Project Outcomes

Please provide the following information about final project achievements and results.

These questions attempt to capture the **direct** outcomes of the project. Depending on your project timeframe, include CUMULATIVE outcomes for 3 years after project closeout.

In the Outcomes column, please provide a **numerical** estimate. If you did not track information for a specific outcome, please enter "**DNT**" in the corresponding box in the Outcomes column. If an outcome measure is not applicable to your project, please enter "**NA**" in the corresponding box in the Outcomes column.

In the Year(s) column, please indicate the **number** of years for which the outcome measure was tracked.

Use the definitions provided below to determine how a given outcome should be expressed.

DEFINITIONS:

Outcomes: Changes that result from the activities

Households Improved: The cumulative total number of households with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the "Households Served" output measure.

Businesses Improved: The cumulative total number of businesses with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the "Businesses Served" output measure.

Organizations Improved: The cumulative total number of organizations with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the "Organizations Served" output measure.

Communities Improved: The cumulative total number of communities with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the "Communities Served" output measure.

Jobs Created: The total number of (1) direct hires made as a result of the project's operation (e.g. teachers hired, public safety, etc.); and (2) direct private sector jobs created following the



delivery of ARC-funded services or project completion. This does **NOT** include construction jobs to build the ARC funded project. *In the case of part-time jobs, please convert these to full-time equivalent and round up to report whole numbers.*

Jobs Retained: The total number of jobs that would be lost or relocated without the ARC-funded project. Existing jobs benefiting from an infrastructure upgrade or other ARC-funded project should not be counted as "Jobs Retained."

Businesses Created: The total number of businesses that located in the region as a direct result of the ARC-supported project within three years of the project end date.

Businesses Retained: The total number of existing businesses that remained in the region due to the ARC-supported project.

Leveraged Private Investment (LPI): The total dollar amount of private sector financial commitments and investment that were **not** part of the project funding, but followed as a result of the completion of the ARC project.

Revenues Increased (non-export): The total dollar amount of any increase in non-export (domestic) sales that occurred among businesses as a result of the ARC project.

Revenues Increased (export): The total dollar amount of any increase in export (international) sales that occurred among businesses as a result of the ARC project.

Costs Reduced: The total dollar amount of costs reduced as a result of the ARC project activities, within one year of project implementation. For example, small business technical assistance may help a business streamline and cut costs, or an energy efficiency program may help to reduce energy costs.

13. & 14. Group Outcomes:	Outcomes	Year(s)
Households Improved	<input type="text"/>	
Businesses Improved	<input type="text"/>	
Organizations Improved	<input type="text"/>	
Communities Improved	<input type="text"/>	

15. & 16. Economic Outcomes:	
Jobs Created	<input type="text"/>
Jobs Retained	<input type="text"/>
Businesses Created	<input type="text"/>
Businesses Retained	<input type="text"/>
Leveraged Private Investment (\$)	<input type="text"/>
Revenues Increased (non-export, \$)	<input type="text"/>
Revenues Increased (export, \$)	<input type="text"/>
Costs Reduced (\$)	<input type="text"/>

17. In what industries were the jobs created or retained? Please add a quantified number of jobs for each affected industry.

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation Utilities
- Wholesale
- Retail
- Finance, Insurance or Real Estate
- Services
- Other

18. List any other outcomes that were measured or evaluated: _____

19. Please provide relevant information about how the outcome measures were calculated such as data sources used or key assumptions.

Section D: Other Impacts of ARC Funding

20. To what extent are the estimated outcomes attributable to the ARC intervention and funding?

- a. Entirely
- b. Mostly
- c. Somewhat
- d. Slightly
- e. Too difficult to determine

21. What do you think would have happened to the project if ARC funding had not been available?

- f. Would have been completed with other funds in approximately the same time period
- g. Would have been delayed for up to a year
- h. Would have been delayed for a year or more
- i. Would have been completed on a smaller scale
- j. Would not have been undertaken

22. Aside from the direct jobs and investment associated with the project, were there any other positive or negative economic impacts on the community? If so, please explain and quantify if possible.

23. Did the project help attract any additional government or philanthropic funding? Please describe.

24. Please describe any private investment not directly related to the project that occurred as a result of the project.

25. Please provide any additional comments on the project in terms of accomplishments, challenges, or other relevant information to help with the program evaluation.

Section E: Long-Range Impacts

Using the measures below, please rate the long-term impact of your project on the economy, the environment, and the quality of life in your community.

DESCRIPTION OF CHOICES

None: Project had little to no impact on the measure's current trend

Slight: Project impact was not large enough to reverse or stabilize the measure's current trend

Moderate: Project impact contributed to the stabilization or reversal of the measure's current trend

High: Project impact was responsible for significant improvement in the measure's current trend

26. Economic Measures

What impact did this project have on: **None Slight Moderate High**

Attracting new residents or stabilizing the area's population

Attracting new jobs or increasing employment at existing businesses

Creating new sources of income or increasing income for local residents

Increasing local business sales or the value of business assets (such as equipment, real estate)

Increasing the value of household assets (such as homes, land, farms) for local residents

Increasing the value of community assets (such as community buildings, schools, infrastructure, parks)

Other economic measures (please specify):

27. Competitiveness Measures

None Slight Moderate High

What impact did this project have on:

Improving the stability and sustainability of the local economy

Improving the efficiency of business operations or public services

Improving the productivity of students, employees, businesses, land, or other assets

Improving the skill level of the workforce

Increasing the viability of local businesses

Improving access to markets for local products, businesses, artisans, and entrepreneurs

Reducing the cost of doing business

Other competitiveness measures (please specify):

28. Environmental Measures

None Slight Moderate High

What impact did this project have on:

Improving air or water quality

Improving quality and/or access to land and natural resources

Waste reduction or improving waste management (reuse, recycling, alternative energy, biofuels)

Improving energy security and independence

Increasing energy efficiency or conservation

Other environmental measures (please specify):

29. Quality of Life Measures

None Slight Moderate High

What impact did this project have on:

Improving access to culture, arts, historic sites, and other amenities

Improving civic life and governance

Improving public health, safety, or well-being

Improving public services & institutions

Increasing recreational opportunities

Improving the diversity (age, gender, race, ethnicity, economic status) of the population

Increasing knowledge and educational levels of the population

Other quality of life measures (please specify):

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Appalachian Regional Commission Program Evaluation of Job Creation and Retention Projects Questionnaire May 2014

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Section A: Background Information

- 1. In order to track responses and enable us to follow-up with you, we ask that you provide your contact information.**
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 - State
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 - Email
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- 3. What was the ARC project ID (for example, AL-12345)?**
- 4. This project primarily benefited (select all that apply):**
 - Households
 - New businesses
 - Existing small to medium-sized businesses
 - Business / industrial park(s)
 - Entrepreneurs
 - Youth
 - Residents
 - Government officials
 - Non-profit organizations
 - Conference attendees
 - Downtown district
 - Public services
 - Researchers
 - Students
 - Policy makers
 - Healthcare providers
 - Future ARC projects
 - Other (please specify)

5. The primary goal(s) of the project include (select all that apply):

- i. Business assistance
- j. Attracting visitors
- k. Promoting arts and culture
- l. Environmental preservation
- m. Developing energy industries
- n. Improving energy efficiency
- o. Supporting local food production and sales
- p. Other (please specify)

6. Based on the following definitions, how would you classify the project?

- h. **Local Food:** A project that aims to start or develop a farm or a business, incubator, etc. in the agriculture or culinary fields.
- i. **Child Care / Education:** A project that builds or expands a school, designs a new class or curriculum, sets up a day care, or benefits children or students in some other way.
- j. **Community Building / Tourism:** A project that looks to enhance communities through building, renovating or marketing tourist attractions or fixing associated infrastructure.
- k. **Energy / Environmental:** A project that looks to build a power plant, improve energy efficiency, or protect the environment.
- l. **Planning / Research:** A project that looks to develop a plan, possibly associated with one of the other categories, or conduct some form of research.
- m. **Business / Training:** A project that creates a business or incubator for an industry not listed in other categories a-e above. This type of project may also involve training employees or adults that are not considered students.
- n. **Other:** Please describe.

Community Building / Tourism Projects

Additional activities undertaken by this project include (check all that apply):

7. Arts / Culture Tourism:

- a. Heritage, craft, or music trails
- b. Planning for, designing, or constructing new attractions
- c. Training and technical assistance to tourism-based entrepreneurs and businesses
- d. None of the above
- e. Other (please specify):

8. Sector-Based Strategies:

- a. Boosting competitive advantage in value-added agriculture (includes dairy and aquaculture)
- b. Assistance to a wood product industry
- c. Advancement in biotechnology
- d. None of the above
- e. Other (please specify):

9. Energy and the Environment:

- a. Development-oriented conservation project
- b. Gateway community development
- c. Land reclamation
- d. Brownfield site preparation
- e. Developing “green” infrastructure
- f. Water purification/stream clean-up
- g. Improving energy efficiency
- h. Development of renewable energy sources (wind, solar, etc.)
- i. Non-renewable resource industry (coal, gas, etc.)
- j. Training or certification program (ex. LEED certification)
- k. None of the above
- l. Other (please specify):

10. Business Incubation:

- a. Construction of business incubation building
- b. Management and/or operations of incubation building
- c. Incubation for manufacturing businesses
- d. Incubation for service industries
- e. Incubation for food related businesses
- f. Incubation for arts related businesses
- g. Incubation for a variety of industries
- h. None of the above
- i. Other (please specify):

11. Entrepreneurship Education:

- a. K – 12
- b. College
- c. Adult
- d. None of the above
- e. Other (please specify):

12. Export Development:

- a. Trade show assistance
- b. Export readiness training
- c. International market research
- d. Inbound trade missions
- e. Commercial service “Gold Key” service
- f. None of the above
- g. Other (please specify):

13. Community Infrastructure:

- a. Provided first time water/sewer service
- b. Upgraded water/sewer service
- c. Installed fiber-optic cable to reach unserved area
- d. Extended gas line
- e. None of the above
- f. Other (please specify):

14. Community Facility:

- a. Construction of a community center, theater, day care center, or public service building
- b. Equipped a public computer lab
- c. Technology for a distance learning center
- d. None of the above
- e. Other (please specify):

15. Community Revitalization:

- a. Hired a marketing coordinator
- b. Create a Main Street program
- c. Streetscaping or infrastructure improvements
- d. Erosion control and land stabilization
- e. Flood berms
- f. Hazard mitigation
- g. Flood-recovery coordination
- h. Homeland security
- i. None of the above
- j. Other (please specify):

16. Transportation:

- a. Improvement to a railway
- b. Widened sidewalks/added bike lanes
- c. Constructed a trail
- d. None of the above
- e. Other (please specify):

17. Housing:

- a. Water and sewer to new housing project serving low-income families or special needs citizens
- b. Homeownership counseling
- c. Capacity building for non-profit developers
- d. None of the above
- e. Other (please specify):

18. Please use this box to provide any additional information, including: data sources; estimation methods; or anything else that may be relevant.

Section B: Project Outputs

What specific results (*outputs*) were actually achieved by this project? These questions attempt to capture the characteristics, capacity and direct outputs of the job creation and retention project. Depending on your project timeframe, include **CUMULATIVE** outputs up to 3 years after project closeout.

In the Output column, please provide a **numerical** estimate. If you did not track information for a specific output, please enter “DNT” in the corresponding box in the Output column (*e.g., you do not have information about the number of households served*). If an output is not applicable to your project, please enter “NA” in the corresponding box in the Output column (*e.g., your project did not provide services to households*).

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Organizations Served: The cumulative total number of organizations that are served by your ARC project, from project inception until now.

Communities Served: The cumulative total number of communities that are served by your ARC project, from inception until now.

Visitors Served: The number of new visitors to a destination resulting from an ARC investment.

Students Served: The total number of students served by the ARC project. For example, the number of students enrolling in a new community program the year of the project and for three years after.

19. Group Outputs:

	Output
Households Served	<input type="text"/>
Businesses Served	<input type="text"/>
Organizations Served	<input type="text"/>
Communities Served	<input type="text"/>
Visitors Served	
Students Served	

20. List any other outputs that were measured or evaluated (if no other outputs were measured or evaluated, enter “NA” into the box): _____

21. Please use this box to provide any additional information, including: data sources; estimation methods; whether or not outputs vary over time; or anything else that may be relevant (if there is no additional information, enter “NA” into the box).

Section C: Project Outcomes

Please provide the following information about final project achievements and results.

These questions attempt to capture the **direct** outcomes of the project. Depending on your project timeframe, include CUMULATIVE outcomes for 3 years after project closeout.

In the Outcomes column, please provide a **numerical** estimate. If you did not track information for a specific outcome, please enter “DNT” in the corresponding box in the Outcomes column. If an outcome measure is not applicable to your project, please enter “NA” in the corresponding box in the Outcomes column.

In the Year(s) column, please indicate the **number** of years for which the outcome measure was tracked.

Use the definitions provided below to determine how a given outcome should be expressed.

DEFINITIONS:

Outcomes: Changes that result from the activities

Households Improved: The cumulative total number of households with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Households Served” output measure.

Businesses Improved: The cumulative total number of businesses with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Businesses Served” output measure.

Organizations Improved: The cumulative total number of organizations with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Organizations Served” output measure.

Communities Improved: The cumulative total number of communities with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Communities Served” output measure.

Jobs Created: The total number of (1) direct hires made as a result of the project’s operation (e.g. teachers hired, public safety, etc.); and (2) direct private sector jobs created following the delivery of ARC-funded services or project completion. This does **NOT** include construction jobs to build the ARC funded project. *In the case of part-time jobs, please convert these to full-time equivalent and round up to report whole numbers.*

Jobs Retained: The total number of jobs that would be lost or relocated without the ARC-funded project. Existing jobs benefiting from an infrastructure upgrade or other ARC-funded project should not be counted as “Jobs Retained.”

Businesses Created: The total number of businesses that located in the region as a direct result of the ARC-supported project within three years of the project end date.

Businesses Retained: The total number of existing businesses that remained in the region due to the ARC-supported project.

Leveraged Private Investment (LPI): The total dollar amount of private sector financial commitments and investment that were **not** part of the project funding, but followed as a result of the completion of the ARC project.

Revenues Increased (non-export): The total dollar amount of any increase in non-export (domestic) sales that occurred among businesses as a result of the ARC project.



Revenues Increased (export): The total dollar amount of any increase in export (international) sales that occurred among businesses as a result of the ARC project.

Costs Reduced: The total dollar amount of costs reduced as a result of the ARC project activities, within one year of project implementation. For example, small business technical assistance may help a business streamline and cut costs, or an energy efficiency program may help to reduce energy costs.

22. & 23. Group Outcomes:	Outcomes	Year(s)
Households Improved	<input type="text"/>	
Businesses Improved	<input type="text"/>	
Organizations Improved	<input type="text"/>	
Communities Improved	<input type="text"/>	

24. & 25. Economic Outcomes:

Jobs Created	<input type="text"/>
Jobs Retained	<input type="text"/>
Businesses Created	<input type="text"/>
Businesses Retained	<input type="text"/>
Leveraged Private Investment (\$)	<input type="text"/>
Revenues Increased (non-export, \$)	<input type="text"/>
Revenues Increased (export, \$)	<input type="text"/>
Costs Reduced (\$)	<input type="text"/>

26. In what industries were the jobs created or retained? Please add a quantified number of jobs for each affected industry.

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation Utilities
- Wholesale
- Retail
- Finance, Insurance or Real Estate
- Services
- Other

27. List any other outcomes that were measured or evaluated: _____

28. Please provide relevant information about how the outcome measures were calculated such as data sources used or key assumptions.

Section D: Other Impacts of ARC Funding

29. To what extent are the estimated outcomes attributable to the ARC intervention and funding?
- Entirely
 - Mostly
 - Somewhat
 - Slightly
 - Too difficult to determine
30. What do you think would have happened to the project if ARC funding had not been available?
- Would have been completed with other funds in approximately the same time period
 - Would have been delayed for up to a year
 - Would have been delayed for a year or more
 - Would have been completed on a smaller scale
 - Would not have been undertaken
31. Aside from the direct jobs and investment associated with the project, were there any other positive or negative economic impacts on the community? If so, please explain and quantify if possible.
32. Did the project help attract any additional government or philanthropic funding? Please describe.
33. Please describe any private investment not directly related to the project that occurred as a result of the project.
34. Please provide any additional comments on the project in terms of accomplishments, challenges, or other relevant information to help with the program evaluation.

Section E: Long-Range Impacts

Using the measures below, please rate the long-term impact of your project on the economy, the environment, and the quality of life in your community.

DESCRIPTION OF CHOICES:

None: Project had little to no impact on the measure's current trend

Slight: Project impact was not large enough to reverse or stabilize the measure's current trend

Moderate: Project impact contributed to the stabilization or reversal of the measure's current trend

High: Project impact was responsible for significant improvement in the measure's current trend

35. Economic Measures

None Slight Moderate High

What impact did this project have on:

- Attracting new residents or stabilizing the area's population
- Attracting new jobs or increasing employment at existing businesses
- Creating new sources of income or increasing income for local residents
- Increasing local business sales or the value of business assets (such as equipment, real estate)
- Increasing the value of household assets (such as homes, land, farms) for local residents
- Increasing the value of community assets (such as community buildings, schools, infrastructure, parks)
- Other economic measures (please specify):

36. Competitiveness Measures

None Slight Moderate High

What impact did this project have on:

- Improving the stability and sustainability of the local economy
- Improving the efficiency of business operations or public services
- Improving the productivity of students, employees, businesses, land, or other assets
- Improving the skill level of the workforce
- Increasing the viability of local businesses
- Improving access to markets for local products, businesses, artisans, and entrepreneurs
- Reducing the cost of doing business
- Other competitiveness measures (please specify):

37. Environmental Measures

None Slight Moderate High

What impact did this project have on:

- Improving air or water quality
- Improving quality and/or access to land and natural resources
- Waste reduction or improving waste management (reuse, recycling, alternative energy, biofuels)
- Improving energy security and independence
- Increasing energy efficiency or conservation
- Other environmental measures (please specify):

38. Quality of Life Measures

None Slight Moderate High

What impact did this project have on:

- Improving access to culture, arts, historic sites, and other amenities
- Improving civic life and governance
- Improving public health, safety, or well-being
- Improving public services & institutions
- Increasing recreational opportunities
- Improving the diversity (age, gender, race, ethnicity, economic status) of the population
- Increasing knowledge and educational levels of the population
- Other quality of life measures (please specify):

Thank you very much for participating in the Appalachian Regional Commission Program Evaluation survey. If you have any questions, please contact Chris Mongelli at christopher.mongelli@hdrinc.com or 617-603-6352.

Appalachian Regional Commission Program Evaluation of Job Creation and Retention Projects Questionnaire May 2014

This short questionnaire should not take more than 20 minutes to complete. All information will be aggregated prior to release. Your responses will be kept confidential.

The results of this questionnaire will help the Appalachian Regional Commission fulfill its mission to promote economic development in the region, and assist current and future grantees with improving project performance measurement. If you have any questions, please contact Chris Mongelli (617-603-6352 or christopher.mongelli@hdrinc.com) or Julie Marshall (202-884-7790 or jmarshall@arc.gov). Thank you very much for participating.

SECTION A: Background Information

- 1. In order to track responses and enable us to follow-up with you, we ask that you provide your contact information.**
 - Name of person completing this questionnaire
 - Organization
 - Address
 - City
 - State
 - Zip
 - Phone
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- 2. What was the ARC project title?**
- 3. What was the ARC project ID (for example, AL-12345)?**
- 4. This project primarily benefited (select all that apply):**
 - Households
 - New businesses
 - Existing small to medium-sized businesses
 - Business / industrial park(s)
 - Entrepreneurs
 - Youth
 - Residents
 - Government officials
 - Non-profit organizations
 - Conference attendees
 - Downtown district
 - Public services
 - Researchers
 - Students
 - Policy makers
 - Healthcare providers
 - Future ARC projects
 - Other (please specify)

5. The primary goal(s) of the project include (select all that apply):

- a. Business assistance
- b. Attracting visitors
- c. Promoting arts and culture
- d. Environmental preservation
- e. Developing energy industries
- f. Improving energy efficiency
- g. Supporting local food production and sales
- h. Other (please specify):

6. Based on the following definitions, how would you classify the project?

- a. **Local Food:** A project that aims to start or develop a farm or a business, incubator, etc. in the agriculture or culinary fields.
- b. **Child Care / Education:** A project that builds or expands a school, designs a new class or curriculum, sets up a day care, or benefits children or students in some other way.
- c. **Community Building / Tourism:** A project that looks to enhance communities through building, renovating or marketing tourist attractions or fixing associated infrastructure.
- d. **Energy / Environmental:** A project that looks to build a power plant, improve energy efficiency, or protect the environment.
- e. **Planning / Research:** A project that looks to develop a plan, possibly associated with one of the other categories, or conduct some form of research.
- f. **Business / Training:** A project that creates a business or incubator for an industry not listed in other categories a-e above. This type of project may also involve training employees or adults that are not considered students.
- g. **Other:** Please describe.

Energy / Environmental Projects

Additional activities undertaken by this project include (check all that apply):

7. Transportation:

- a. Improvement to a railway
- b. Widened sidewalks/added bike lanes
- c. Constructed a trail
- d. None of the above
- e. Other (please specify):

8. Community Revitalization:

- a. Hired a marketing coordinator
- b. Create a Main Street program
- c. Streetscaping or infrastructure improvements
- d. Erosion control and land stabilization
- e. Flood berms
- f. Hazard mitigation
- g. Flood-recovery coordination
- h. Homeland security
- i. None of the above
- j. Other (please specify):

9. Please use this box to provide any additional information, including: data sources; estimation methods; or anything else that may be relevant.

Section B: Project Outputs

What specific results (*outputs*) were actually achieved by this project? These questions attempt to capture the characteristics, capacity and direct outputs of the job creation and retention project. Depending on your project timeframe, include **CUMULATIVE** outputs up to 3 years after project closeout.

In the Output column, please provide a **numerical** estimate. If you did not track information for a specific output, please enter “**DNT**” in the corresponding box in the Output column (*e.g., you do not have information about the number of households served*). If an output is not applicable to your project, please enter “**NA**” in the corresponding box in the Output column (*e.g., your project did not provide services to households*).

Use the definitions provided below to determine how a given output should be expressed.

DEFINITIONS:

Outputs: Measures of a program's activities

Households Served: The cumulative total number of households that are served by your ARC project, from project inception until now.

Businesses Served: The cumulative total number of businesses that are served by your ARC project, from project inception until now.

Organizations Served: The cumulative total number of organizations that are served by your ARC project, from project inception until now.

Communities Served: The cumulative total number of communities that are served by your ARC project, from inception until now.

Visitors Served: The number of new visitors to a destination resulting from an ARC investment.

Students Served: The total number of students served by the ARC project. For example, the number of students enrolling in a new community program the year of the project and for three years after.

10. Group Outputs:

Output

Households Served

Businesses Served

Organizations Served

Communities Served

Visitors Served

Students Served

11. List any other outputs that were measured or evaluated (if no other outputs were measured, enter “NA” into the box): _____

12. Please use this box to provide any additional information, including: data sources; estimation methods; whether or not outputs vary over time; or anything else that may be relevant (if there is no additional information, enter "NA" into the box).

Section C: Project Outcomes

Please provide the following information about final project achievements and results.

These questions attempt to capture the **direct** outcomes of the project. Depending on your project timeframe, include CUMULATIVE outcomes for 3 years after project closeout.

In the Outcomes column, please provide a **numerical** estimate. If you did not track information for a specific outcome, please enter "**DNT**" in the corresponding box in the Outcomes column. If an outcome measure is not applicable to your project, please enter "**NA**" in the corresponding box in the Outcomes column.

In the Year(s) column, please indicate the **number** of years for which the outcome measure was tracked.

Use the definitions provided below to determine how a given outcome should be expressed.

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Communities Improved: The cumulative total number of communities with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the "Communities Served" output measure.

Jobs Created: The total number of (1) direct hires made as a result of the project's operation (e.g. teachers hired, public safety, etc.); and (2) direct private sector jobs created following the delivery of ARC-funded services or project completion. This does **NOT** include construction jobs to build the ARC funded project. *In the case of part-time jobs, please convert these to full-time equivalent and round up to report whole numbers.*

Jobs Retained: The total number of jobs that would be lost or relocated without the ARC-funded project. Existing jobs benefiting from an infrastructure upgrade or other ARC-funded project should not be counted as "Jobs Retained."

Businesses Created: The total number of businesses that located in the region as a direct result of the ARC-supported project within three years of the project end date.

Businesses Retained: The total number of existing businesses that remained in the region due to the ARC-supported project.

Leveraged Private Investment (LPI): The total dollar amount of private sector financial commitments and investment that were **not** part of the project funding, but followed as a result of the completion of the ARC project.

Revenues Increased (non-export): The total dollar amount of any increase in non-export (domestic) sales that occurred among businesses as a result of the ARC project.

Revenues Increased (export): The total dollar amount of any increase in export (international) sales that occurred among businesses as a result of the ARC project.

Costs Reduced: The total dollar amount of costs reduced as a result of the ARC project activities, within one year of project implementation. For example, small business technical assistance may help a business streamline and cut costs, or an energy efficiency program may help to reduce energy costs.

13. & 14. Group Outcomes:

Outcomes

Year(s)

Households Improved

Businesses Improved

Organizations Improved

Communities Improved

15. & 16. Economic Outcomes:

Jobs Created

Jobs Retained

Businesses Created

Businesses Retained

Leveraged Private Investment (\$)

Revenues Increased (non-export, \$)

Revenues Increased (export, \$)

Costs Reduced (\$)

17. In what industries were the jobs created or retained? Please add a quantified number of jobs for each affected industry.

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation Utilities
- Wholesale
- Retail
- Finance, Insurance or Real Estate
- Services
- Other

18. List any other outcomes that were measured or evaluated: _____

19. Please provide relevant information about how the outcome measures were calculated such as data sources used or key assumptions.

Section D: Other Impacts of ARC Funding

20. To what extent are the estimated outcomes attributable to the ARC intervention and funding?
- Entirely
 - Mostly
 - Somewhat
 - Slightly
 - Too difficult to determine
21. What do you think would have happened to the project if ARC funding had not been available?
- Would have been completed with other funds in approximately the same time period
 - Would have been delayed for up to a year
 - Would have been delayed for a year or more
 - Would have been completed on a smaller scale
 - Would not have been undertaken
22. Aside from the direct jobs and investment associated with the project, were there any other positive or negative economic impacts on the community? If so, please explain and quantify if possible.
23. Did the project help attract any additional government or philanthropic funding? Please describe.
24. Please describe any private investment not directly related to the project that occurred as a result of the project.
25. Please provide any additional comments on the project in terms of accomplishments, challenges, or other relevant information to help with the program evaluation.

Section E: Long-Range Impacts

Using the measures below, please rate the long-term impact of your project on the economy, the environment, and the quality of life in your community.

DESCRIPTION OF CHOICES:

None: Project had little to no impact on the measure's current trend

Slight: Project impact was not large enough to reverse or stabilize the measure's current trend

Moderate: Project impact contributed to the stabilization or reversal of the measure's current trend

High: Project impact was responsible for significant improvement in the measure's current trend

26. Economic Measures

None Slight Moderate High

What impact did this project have on:

Attracting new residents or stabilizing the area's population
Attracting new jobs or increasing employment at existing businesses
Creating new sources of income or increasing income for local residents
Increasing local business sales or the value of business assets (such as equipment, real estate)
Increasing the value of household assets (such as homes, land, farms) for local residents
Increasing the value of community assets (such as community buildings, schools, infrastructure, parks)
Other economic measures (please specify):

27. Competitiveness Measures

None Slight Moderate High

What impact did this project have on:

Improving the stability and sustainability of the local economy
Improving the efficiency of business operations or public services
Improving the productivity of students, employees, businesses, land, or other assets
Improving the skill level of the workforce
Increasing the viability of local businesses
Improving access to markets for local products, businesses, artisans, and entrepreneurs
Reducing the cost of doing business
Other competitiveness measures (please specify):

28. Environmental Measures

None Slight Moderate High

What impact did this project have on:

Improving air or water quality
Improving quality and/or access to land and natural resources
Waste reduction or improving waste management (reuse, recycling, alternative energy, biofuels)
Improving energy security and independence
Increasing energy efficiency or conservation
Other environmental measures (please specify):

29. Quality of Life Measures

None Slight Moderate High

What impact did this project have on:

Improving access to culture, arts, historic sites, and other amenities
Improving civic life and governance
Improving public health, safety, or well-being
Improving public services & institutions
Increasing recreational opportunities
Improving the diversity (age, gender, race, ethnicity, economic status) of the population
Increasing knowledge and educational levels of the population
Other quality of life measures (please specify):

Thank you very much for participating in the Appalachian Regional Commission Program Evaluation survey. If you have any questions, please contact Chris Mongelli at christopher.mongelli@hdrinc.com or 617-603-6352.

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5. The primary goal(s) of the project include (select all that apply):

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6. Based on the following definitions, how would you classify the project?

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- b. **Child Care / Education:** A project that builds or expands a school, designs a new class or curriculum, sets up a day care, or benefits children or students in some other way.
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- g. **Other:** Please describe.

Local Food Projects

Additional activities undertaken by this project include (check all that apply):

7. Technical Assistance:

- a. Assist businesses in developing marketing strategies
- b. Implement technology transfer program
- c. Facilitate business training course
- d. Work with potential entrepreneurs to develop business plan
- e. Provide expertise in areas of finance or accounting
- f. None of the above
- g. Other (please specify):

8. Business Development:

- h. Construction or rehabilitation of building
- i. Construction of business incubation building
- j. Reuse of existing brownfield
- k. None of the above
- l. Other (please specify):

9. Please use this box to provide any additional information, including: data sources; estimation methods; or anything else that may be relevant.

Section B: Project Outputs

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10. Group Outputs:

	Output
Households Served	<input type="text"/>
Businesses Served	<input type="text"/>
Organizations Served	<input type="text"/>
Communities Served	<input type="text"/>
Visitors Served	
Students Served	

11. List any other outputs that were measured or evaluated (if no other outputs were measured, enter “NA” into the box): _____

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13. & 14 Group Outcomes:

Outcomes

Year(s)

Households Improved	<input type="text"/>
Businesses Improved	<input type="text"/>
Organizations Improved	<input type="text"/>
Communities Improved	<input type="text"/>

15. & 16. Economic Outcomes:

Jobs Created	<input type="text"/>
Jobs Retained	<input type="text"/>
Businesses Created	<input type="text"/>
Businesses Retained	<input type="text"/>
Leveraged Private Investment (\$)	<input type="text"/>
Revenues Increased (non-export, \$)	<input type="text"/>
Revenues Increased (export, \$)	<input type="text"/>
Costs Reduced (\$)	<input type="text"/>

17. In what industries were the jobs created or retained? Please add a quantified number of jobs for each affected industry.

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation Utilities
- Wholesale
- Retail
- Finance, Insurance or Real Estate
- Services
- Other

18. List any other outcomes that were measured or evaluated: _____

19. Please provide relevant information about how the outcome measures were calculated such as data sources used or key assumptions.

Section D: Other Impacts of ARC Funding

20. To what extent are the estimated outcomes attributable to the ARC intervention and funding?
- Entirely
 - Mostly
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Using the measures below, please rate the long-term impact of your project on the economy, the environment, and the quality of life in your community.

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26. Economic Measures

None Slight Moderate High

What impact did this project have on:

- Attracting new residents or stabilizing the area's population
- Attracting new jobs or increasing employment at existing businesses
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- Increasing local business sales or the value of business assets (such as equipment, real estate)
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What impact did this project have on:

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- Improving the productivity of students, employees, businesses, land, or other assets
- Improving the skill level of the workforce
- Increasing the viability of local businesses
- Improving access to markets for local products, businesses, artisans, and entrepreneurs
- Reducing the cost of doing business
- Other competitiveness measures (please specify):

28. Environmental Measures

None Slight Moderate High

What impact did this project have on:

- Improving air or water quality
- Improving quality and/or access to land and natural resources
- Waste reduction or improving waste management (reuse, recycling, alternative energy, biofuels)
- Improving energy security and independence
- Increasing energy efficiency or conservation
- Other environmental measures (please specify):

29. Quality of Life Measures

None Slight Moderate High

What impact did this project have on:

- Improving access to culture, arts, historic sites, and other amenities
- Improving civic life and governance
- Improving public health, safety, or well-being
- Improving public services & institutions
- Increasing recreational opportunities
- Improving the diversity (age, gender, race, ethnicity, economic status) of the population
- Increasing knowledge and educational levels of the population
- Other quality of life measures (please specify):

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 - Future ARC projects
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5. The primary goal(s) of the project include (select all that apply):

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- g. **Other:** Please describe.

Planning / Research Projects

Additional activities undertaken by this project include (check all that apply):

7. Research Topics:

- a. Performing socioeconomic or demographic analysis
- b. Economic impact study
- c. Improving education practices
- d. Advancing health technology or awareness
- e. Understanding environmental impacts
- f. Developing energy efficiency
- g. None of the above
- h. Other (please specify):

8. Please use this box to provide any additional information, including: data sources; estimation methods; or anything else that may be relevant.

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Organizations Served	<input type="text"/>
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Visitors Served	
Students Served	

10. List any other outputs that were measured or evaluated (if no other outputs were measured, enter “NA” into the box): _____

11. Please use this box to provide any additional information, including: data sources; estimation methods; whether or not outputs vary over time; or anything else that may be relevant (if there is no additional information, enter “NA” into the box).

Section C: Project Outcomes

Please provide the following information about final project achievements and results.

These questions attempt to capture the **direct** outcomes of the project. Depending on your project timeframe, include CUMULATIVE outcomes for 3 years after project closeout.

In the Outcomes column, please provide a **numerical** estimate. If you did not track information for a specific outcome, please enter “DNT” in the corresponding box in the Outcomes column. If an outcome measure is not applicable to your project, please enter “NA” in the corresponding box in the Outcomes column.

In the Year(s) column, please indicate the **number** of years for which the outcome measure was tracked.

Use the definitions provided below to determine how a given outcome should be expressed.

DEFINITIONS:

Outcomes: Changes that result from the activities

Households Improved: The cumulative total number of households with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Households Served” output measure.

Businesses Improved: The cumulative total number of businesses with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Businesses Served” output measure.

Organizations Improved: The cumulative total number of organizations with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Organizations Served” output measure.

Communities Improved: The cumulative total number of communities with a measurable improvement due to the ARC project. This number is *ALWAYS* the same as, or a subset of, the “Communities Served” output measure.

Jobs Created: The total number of (1) direct hires made as a result of the project’s operation (e.g. teachers hired, public safety, etc.); and (2) direct private sector jobs created following the delivery of ARC-funded services or project completion. This does **NOT** include construction jobs to build the ARC funded project. *In the case of part-time jobs, please convert these to full-time equivalent and round up to report whole numbers.*

Jobs Retained: The total number of jobs that would be lost or relocated without the ARC-funded project. Existing jobs benefiting from an infrastructure upgrade or other ARC-funded project should not be counted as “Jobs Retained.”

Businesses Created: The total number of businesses that located in the region as a direct result of the ARC-supported project within three years of the project end date.

Businesses Retained: The total number of existing businesses that remained in the region due to the ARC-supported project.

Leveraged Private Investment (LPI): The total dollar amount of private sector financial commitments and investment that were **not** part of the project funding, but followed as a result of the completion of the ARC project.

Revenues Increased (non-export): The total dollar amount of any increase in non-export (domestic) sales that occurred among businesses as a result of the ARC project.

Revenues Increased (export): The total dollar amount of any increase in export (international) sales that occurred among businesses as a result of the ARC project.

Costs Reduced: The total dollar amount of costs reduced as a result of the ARC project activities, within one year of project implementation. For example, small business technical assistance may help a business streamline and cut costs, or an energy efficiency program may help to reduce energy costs.

12. & 13. Group Outcomes: **Outcomes** **Year(s)**

Households Improved	<input type="text"/>
Businesses Improved	<input type="text"/>
Organizations Improved	<input type="text"/>
Communities Improved	<input type="text"/>

14. & 15. Economic Outcomes:

Jobs Created	<input type="text"/>
Jobs Retained	<input type="text"/>
Businesses Created	<input type="text"/>
Businesses Retained	<input type="text"/>
Leveraged Private Investment (\$)	<input type="text"/>
Revenues Increased (non-export, \$)	<input type="text"/>
Revenues Increased (export, \$)	<input type="text"/>
Costs Reduced (\$)	<input type="text"/>

16. In what industries were the jobs created or retained? Please add a quantified number of jobs for each affected industry.

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation Utilities
- Wholesale
- Retail
- Finance, Insurance or Real Estate
- Services
- Other

17. List any other outcomes that were measured or evaluated: _____

18. Please provide relevant information about how the outcome measures were calculated such as data sources used or key assumptions.

Section D: Other Impacts of ARC Funding

19. To what extent are the estimated outcomes attributable to the ARC intervention and funding?
 - a. Entirely
 - b. Mostly
 - c. Somewhat
 - d. Slightly
 - e. Too difficult to determine
20. What do you think would have happened to the project if ARC funding had not been available?
 - a. Would have been completed with other funds in approximately the same time period
 - b. Would have been delayed for up to a year
 - c. Would have been delayed for a year or more
 - d. Would have been completed on a smaller scale
 - e. Would not have been undertaken
21. Aside from the direct jobs and investment associated with the project, were there any other positive or negative economic impacts on the community? If so, please explain and quantify if possible.
22. Did the project help attract any additional government or philanthropic funding? Please describe.
23. Please describe any private investment not directly related to the project that occurred as a result of the project.
24. Please provide any additional comments on the project in terms of accomplishments, challenges, or other relevant information to help with the program evaluation.

Section E: Long-Range Impacts

Using the measures below, please rate the long-term impact of your project on the economy, the environment, and the quality of life in your community.

DESCRIPTION OF CHOICES:

None: Project had little to no impact on the measure's current trend

Slight: Project impact was not large enough to reverse or stabilize the measure's current trend

Moderate: Project impact contributed to the stabilization or reversal of the measure's current trend

High: Project impact was responsible for significant improvement in the measure's current trend

25. Economic Measures

None Slight Moderate High

What impact did this project have on:

Attracting new residents or stabilizing the area's population
Attracting new jobs or increasing employment at existing businesses
Creating new sources of income or increasing income for local residents
Increasing local business sales or the value of business assets (such as equipment, real estate)
Increasing the value of household assets (such as homes, land, farms) for local residents
Increasing the value of community assets (such as community buildings, schools, infrastructure, parks)
Other economic measures (please specify):

26. Competitiveness Measures

None Slight Moderate High

What impact did this project have on:

Improving the stability and sustainability of the local economy
Improving the efficiency of business operations or public services
Improving the productivity of students, employees, businesses, land, or other assets
Improving the skill level of the workforce
Increasing the viability of local businesses
Improving access to markets for local products, businesses, artisans, and entrepreneurs
Reducing the cost of doing business
Other competitiveness measures (please specify):

27. Environmental Measures

None Slight Moderate High

What impact did this project have on:

Improving air or water quality
Improving quality and/or access to land and natural resources
Waste reduction or improving waste management (reuse, recycling, alternative energy, biofuels)
Improving energy security and independence
Increasing energy efficiency or conservation
Other environmental measures (please specify):

28. Quality of Life Measures

None Slight Moderate High

What impact did this project have on:

Improving access to culture, arts, historic sites, and other amenities
Improving civic life and governance
Improving public health, safety, or well-being
Improving public services & institutions
Increasing recreational opportunities
Improving the diversity (age, gender, race, ethnicity, economic status) of the population
Increasing knowledge and educational levels of the population
Other quality of life measures (please specify):

Thank you very much for participating in the Appalachian Regional Commission Program Evaluation survey. If you have any questions, please contact Chris Mongelli at christopher.mongelli@hdrinc.com or 617-603-6352.

Appendix 2 – Policy Discussion

Interview Questions for Rural Development Experts

Introduction: Hi Mr./Ms. [NAME], thank you for taking the time to speak with us. Before we get started, let me take a moment to again quickly run through why we have requested this call with you, and then we can go over the topics we would like to discuss.

Background: As we explained in our introductory email, our firm, HDR, has been engaged by the Appalachian Regional Commission to evaluate the performance of the organization's Job Creation and Retention investments to evaluate the effectiveness of those past investments and provide recommendations for effective use of future funds.

Our primary goal for this interview is to get a better understanding of major challenges for development in rural communities in the US, and what types of solutions are needed. We will couple the findings of our discussions with the other results of our evaluation to provide insight to ARC on the most effective uses of job creation and retention funds going forward.

During the call today we'd like to discuss three main topics:

- Key challenges for rural communities in Appalachia, and more broadly in the US
- Target industries and sectors that the Appalachian region should focus on
- How to measure the success of investments in rural communities.

For all the questions, if you can answer specifically for the Appalachian region that would be preferable, but your insight on US rural communities in general would also be very useful.

Challenges in US rural communities:

1. What are one or two of the major challenges that rural communities face today as they try to improve their socio-economic well-being?
2. Have these challenges changed or evolved over the last two decades?
3. Do you expect different or additional challenges 10 to 20 years from now? If so, what do you anticipate these new challenges will be?

Target industries and sectors for the Appalachians:

1. Do you see an specific industry or sector that presents the greatest opportunities for rural communities?
2. Specifically, are there industries or sectors for which rural communities may have a competitive advantage?
3. Have you seen any new, pronounced trends in the types of jobs created in rural areas?
4. Do any of these industries or jobs aid in increasing per-capita income in rural areas?
5. How do the trending industries in rural areas fit with global industry and growth trends?

Measuring success of investments:

1. In your opinion, what is the best way to measure the success of an economic development investment in US rural communities?
 - a. For instance, ARC currently looks at indicators like change in per capita income, employment rate, and education rate
2. How much time should pass before these indicators are measured? Does it depend on the type of industry/sector?
3. Based on the project analysis portion of this evaluation, preliminary findings indicate that most of ARC's Job Creation and Retention investments are resulting in higher impacts than originally estimated. Does this result align with your sense of the overall success of job creation and retention investments in general in US rural communities, or the Appalachian region specifically?
4. Do you know of any new developments in program evaluation and/or best practices in promoting economic development that the ARC should be aware of?
5. Which types of investments give the "biggest bang for the buck" in the long run? Which projects have the fastest impact? Is there any overlap between the two?
6. Are some types of investments harder to manage than others? Do some types of investments come with a greater risk of uncertainty in their chances of success or the amount of impact?
7. Do you have any suggestions for best-practices for evaluating investment or grant programs?

The role of funders in the economic development of the Appalachians:

1. In your opinion, what role do you think the government (federal and local) and private organizations (non-profit and for-profit) should play in fostering greater economic well-being in rural communities? For example, are these entities meant to catalyze growth and then step away?
2. Have the roles of funders changed in recent years?

Thank you so much for your time.

- Would it be okay to contact you again with additional questions if necessary?
- Would it be ok to use your name in our report to ARC?
- Do you have any suggestions on people or organizations that we should speak with? Do you have their contact information?

Appendix 3 – Policy Interviewees

- Greg Bishak – Financial Strategies and Research Manager, Community Development Financial Institutions Fund, Department of the Treasury
- Rick Cohen – Author of “What Ails Rural Philanthropy and What Must Be Done”
- Brian Dabson – Associate Dean, Research Professor and Director, Institute of Public Policy, Harry S. Truman School of Public Affairs at the University of Missouri
- Edward Feser – Dean at the University of Illinois; Author of “Economic Diversity in Appalachia: Statistics, Strategies, and Guides for Action” prepared for the Appalachian Regional Commission
- Deborah Markley – Co-Director of Center for Rural Entrepreneurship
- Joe McKinney – Executive Director at the National Association of Development Associations
- Scott Miller – Professor at Ohio University
- Michael Oden – Economic development and program evaluation specialist from the University of Texas
- Terance Rephann – Regional Economist at the Weldon Cooper Center for Public Services, University of Virginia; co-author with Andrew Isserman of “The Economic Effects of the Appalachian Regional Commission: An Empirical Assessment of 26 Years of Regional Development Planning”
- Robin Stewart – Professor at Ohio University, Voinovich School of Leadership and Public Affairs
- Lawrence Wood – Specializes in rural and regional development at Ohio University