Appalachian Regional Commission  
Request for Proposals  

A Program Evaluation of ARC’s Water and Wastewater Infrastructure Projects, FY2009-FY2016  

Proposals due on or before the close of business August 24, 2018  

Attention: Kathryn Whiteman  
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Appalachian Regional Commission Request for Proposals:  
A Program Evaluation of ARC’s Water and Wastewater Infrastructure Projects,  
FY2009-FY2016  

I. Overview of Request for Proposals  

The Appalachian Regional Commission (ARC) invites proposals from qualified researchers and consultants to conduct a large-scale program evaluation of ARC-funded water and wastewater infrastructure projects in the Appalachian Region. The evaluation will encompass approximately 385 projects funded from fiscal year 2009 through fiscal year 2016. ARC’s water and wastewater infrastructure projects include new water and/or wastewater systems that serve residential, commercial or industrial properties, or some combination thereof; rehabilitation to existing water and/or wastewater systems; and the construction or rehabilitation of water storage tanks.  

The main purpose of the evaluation is to:  
• Determine the extent to which these projects have succeeded in achieving ARC’s strategic goals;  
• Inform ARC of ways to better encourage innovation as well as develop, assess, and manage water and wastewater infrastructure projects; and  
• Enhance ARC’s ability to document and report program impacts.  

This request for proposals seeks methodologies that include both quantitative and qualitative components. Strategic recommendations on appropriate metrics and methodology for performance evaluation are also desired.  

Critical questions for this evaluation, and the case studies specifically, include:  
• What problems and challenges were the projects designed to address?  
• What approaches did the projects use to ameliorate these problems and challenges?  
• What specific outcomes were projects designed to achieve and did they meet their performance targets?  
• To what extent were project-related gains sustained beyond the period covered by the ARC grant?  
• What factors influenced the project’s success and implementation?  
• What challenges/barriers to success did the project face and how were they overcome?  
• What strategic, actionable recommendations can be made for both ARC and the local communities implementing these types of projects?  
• What guidance can ARC consider during the development and pre-award review of infrastructure projects in the future?  

The evaluation will involve a detailed review of information recorded in ARC’s internal grants management database (ARC.net) and, where necessary, in print documents archived by the Commission. This information will be augmented by information gathered through a data collection process proposed by the contractor. It is expected that this process will include communication with ARC project grantees (e.g., phone interviews, site visits, or online questionnaires) to obtain project-specific outputs and outcomes. The data and information
gathered in this process will be analyzed and, along with case-studies and a discussion of industry innovations and best practices, presented in a draft and final report.

Required deliverables include quarterly reports, a draft and a final report with an executive summary that integrates, summarizes, and interprets key findings of the study. A complete first draft must be submitted to ARC within 12 months of the project’s start with up to an additional six months for review, revision, subsequent drafts and presentation to ARC staff. Although some components of the report will be inherently technical in nature, the final report should be written for a non-technical audience, with the narrative discussion weaving together statistics, analyses, graphs, maps, and tables where appropriate. The selected consultant will work closely with ARC staff in the development of this report.

A Microsoft Word file and an Adobe PDF file must be submitted on completion of the project. A software version of all relevant databases compiled during the study, including all raw data, edited datasets, and results of statistical analyses, must also be submitted at this time. Please note that this evaluation must comply with program evaluation requirements under the Government Performance and Results Act of 1993. See OMB Circular A–11 for additional information (www.whitehouse.gov/omb/circulars_a11_current_year_a11_toe).

II. Background

About Appalachia

The Appalachian Region, as defined in ARC's authorizing legislation, is a 205,000 square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi. It includes all of West Virginia and parts of 12 other states: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia. Forty-two percent of the Region's population is rural, compared with 20 percent of the national population.

The Appalachian Region's economy, which was once highly dependent on extractive industries, has become more diversified in recent times and now includes larger shares of manufacturing and professional services, among other industries. Appalachia has made significant progress over the past five decades: its poverty rate, which was 31 percent in 1960, had fallen to 17.2 percent over the 2010–2014 period. The number of high-poverty counties in the Region (those with poverty rates more than 1.5 times the U.S. average) declined from 295 in 1960 to 91 over the 2010–2014 period.

These gains have transformed the Region from one of widespread poverty to one of economic contrasts: some communities have successfully diversified their economies, while others still require basic infrastructure such as roads, clinics, and water and wastewater systems. The contrasts are not surprising in light of the Region's size and diversity—the Region extends more than 1,000 miles from southern New York to northeastern Mississippi, and is home to more than 25 million people.
**About the Appalachian Regional Commission**

The Appalachian Regional Commission (ARC) is an economic development agency of the federal government and 13 state governments focusing on 420 counties across the Appalachian Region. Established by an act of Congress in 1965, ARC is composed of the governors of the 13 Appalachian states, as well as a federal co-chair appointed by the president. Local participation is provided through multi-county local development districts.

ARC's mission is to innovate, partner, and invest to build community capacity and strengthen economic growth in Appalachia to help the Region achieve socioeconomic parity with the nation. ARC funds projects that address the five goals identified in the Commission's strategic plan:

1. Invest in entrepreneurial and business development strategies that strengthen Appalachia’s economy.
2. Increase the education, knowledge, skills, and health of residents to work and succeed in Appalachia.
3. Invest in critical infrastructure—especially broadband; transportation, including the Appalachian Development Highway System; and water/wastewater systems.
4. Strengthen Appalachia’s community and economic development potential by leveraging the Region’s natural and cultural heritage assets.
5. Build the capacity and skills of current and next-generation leaders and organizations to innovate, collaborate, and advance community and economic development.

Each year, ARC provides funding for several hundred projects in the Appalachian Region in areas such as business development, education and job training, telecommunications, infrastructure, community development, housing, and transportation. These projects create thousands of new jobs; improve local water and wastewater systems; increase school readiness; expand access to health care; assist local communities with strategic planning; and provide technical and managerial assistance to emerging businesses.

Additional information about Appalachia and the Appalachian Regional Commission can be found at [www.arc.gov](http://www.arc.gov).

**III. Scope of Work**

Proposals should present an outline of the research and analysis to be conducted, a work plan, and a schedule for reports and deliverables. The scope of work requires a team of researchers and consultants with a broad set of skills to execute the project.

The scope of work should be informed by ARC’s previous program evaluations of telecommunications and technology, job creation and retention, health, education and workforce development and especially ARC’s 2007 and 2013 reports evaluating public works and infrastructure projects.
The following issues should be incorporated into or addressed in the design of proposals for this research project. Proposals can offer other methodological approaches as needed.

1. **Overview of Project Portfolio**
   The report should include a thorough description of the portfolio of 385 closed water and wastewater projects funded by ARC from FY 2009 to FY 2016. The description should include an analysis of the portfolio by: grantee type, project type, purpose (business development, community development, other), amount of investment (approved versus final), duration of project, location, county economic status, performance measures, and other project characteristics.

2. **Literature Review/Current Trends**
   There have been many recent innovations in the water and wastewater industry, which are not always reflected in projects in the Appalachian Region. ARC is interested in finding ways to encourage innovation in water and wastewater projects throughout the Region in order to help municipalities improve and modernize their infrastructure. The literature review should include a discussion of the current state of innovation for the water and wastewater industry, specifically, innovation in design (i.e. decentralization, use of planning tools), technology (i.e. smart metering, increased efficiency), finance mix (i.e. creative funding sources for new technologies, strategies for a system’s financial sustainability), partnerships (i.e. regional or otherwise), and other relevant trends or implementation strategies.

3. **Methodology**
   Develop research methods to collect performance data on ARC water and wastewater infrastructure projects. This detailed method should be informed by and include a careful review of: a) relevant ARC evaluation research reports (available from www.arc.gov/research); b) other program evaluation, performance measurement and reporting methods used for water and wastewater infrastructure and other government programs. It should include relevant and significant references to methods and preferred approaches for survey data collection of program evaluation for water and wastewater infrastructure projects. Contractors should ensure methods are consistent with the GPRA and *OMB Circular No. A-11* and recent ARC program evaluations.

4. **Data Collection**
   Develop and implement a data collection (i.e. survey/questionnaire) method to obtain updated, accurate project performance data for ARC water and wastewater infrastructure projects. The project impact data collection task will focus on roughly 385 projects that were funded by ARC between FY 2009 through FY 2016. The successful proposal must develop methods to obtain sufficient responses to ensure a valid, robust evaluation. Note that follow-up phone calls and/or e-mails will be needed for grantees that do not respond to the request for participation, in order to reach a suitable sample size.

The goal is to provide complete and accurate performance data for as many water and wastewater infrastructure projects as practicable, supplementing the existing ARC.net database of projects (to be provided to the contractor). Additionally, ARC would like to look at indicators of system sustainability for infrastructure systems funded in the Region (such as the age and size of the system, numbers of residential and non-residential customers, and the ability to remotely
manage the system, including the number of automatic meter reader and advanced metering infrastructure meters installed).

5. **Data Analysis**
Analyze and summarize the data obtained through the survey/questionnaire. The analysis should be organized around direct project outputs (e.g. linear feet of water line; system capacity (MG or MGD); households, businesses, or communities served) and outcomes (e.g. jobs created or retained; households, businesses, or communities improved) as well as other notable impacts (e.g. reduction of water loss; compliance; etc.). The data review should specifically look at the projects’ proposed measures compared to their achieved measures and the extent to which the projects achieved or did not achieve their stated goals. Other relevant performance measures may be proposed by the contractor that link the types of projects outlined above to develop a logical relationship between project goals and outcomes.

6. **Data Presentation**
Data should be presented in appropriate tables, graphs, or charts within the report to enhance comprehension of the results. A software version of all relevant databases compiled during the study, including all raw data, edited datasets, and results of statistical analyses, must also be submitted to ARC at the close of the project. Provide metadata (field name description, definition, source, source date, and equation if computed) for all raw and computed data fields.

7. **Case Studies**
Conduct approximately 10-15 in-depth case studies of ARC water and wastewater infrastructure projects (at least one in each ARC member state if possible). Identify innovative or promising programs that are addressing critical water and wastewater infrastructure needs, and describe how barriers and challenges were overcome. Specific attention should be given to best practices for rural, underserved, and/or economically distressed communities, as well as for innovative approaches to design, technology, financial sustainability, or regional partnerships. Proposals should describe the kind of information to be obtained through these case studies, methods to engage stakeholders (in-person, via phone), and how the information collected in these detailed case studies can inform and provide greater context for the overall evaluation. Other approaches for gathering and presenting qualitative data may be included as well.

8. **Strategic Policy Recommendations and Guidance**
Discuss policy implications raised by the literature review and analysis, and formulate appropriate strategic recommendations. For example, this evaluation provides an opportunity to summarize ARC’s impact and role in water and wastewater infrastructure for economic development and the role it could have in encouraging innovation in these types of projects throughout the Region. The evaluation could also provide recommendations for communities and state partners to consider in light of important innovations, trends, or technology relevant to the Region.
IV. Methodology

The successful applicant will develop a detailed methodology to analyze the topics specified in the Overview and Scope of Work. The methodology should include:

- Description of portfolio of 385 water and wastewater projects funded by ARC from FY 2009 to FY 2016, analyzed in several ways.
- Review of the literature and the current state of innovation for the water and wastewater industry, specifically, innovation in design (i.e. decentralization, use of planning tools), technology (i.e. smart metering, increased efficiency), finance mix (i.e. creative funding sources for new technologies, strategies for a system’s financial sustainability), and partnerships (i.e. regional or otherwise).
- Framework for gathering and analyzing quantitative and qualitative data (may include surveys, focus groups, case studies or other approaches).
- Methods for compiling data and presentation of results.
- Strategic policy recommendations and guidance for ARC staff and partners in encouraging innovation and reviewing, managing, and evaluating water and wastewater grant investments in Appalachia. This section should be based upon information gleaned from all previous components of the evaluation, as well as knowledge of the Region’s key strengths and challenges and input from ARC’s Strategic Investment Plan.

Proposals can offer other methodological approaches as needed. The selected consultant will work closely with ARC in development and management of this report.

V. Technical, Management, and Cost Proposal Contents

A. Technical Proposal

Narrative should not exceed 10 pages, not including the abstract and accompanying resumes and organizational background materials.

1. Summary Abstract (300 words)
In this section, provide a brief abstract of the proposal by summarizing the background, objectives, proposed methodologies, and expected outputs and results of the research.

2. Methodology
Describe the step-by-step approach or methods intended to accomplish all the tasks specified in this RFP. The proposal should provide a detailed explanation of the methodologies to be used, describe the limitations of the selected methods, and justify why the methods were selected over others. The proposal should identify the points and tasks in this research project that will require participation by Commission staff. Further, the proposal should identify specific information needs according to sources, procedures, and individual research tasks that may need to be performed by Commission staff. Finally, the proposal should identify any difficulties that may be encountered in this project and propose practical and sound solutions to these problems.
3. **Project Work Plan and Milestones**

The proposal should describe the phases into which the proposed research can be logically divided and performed. Flow charts should be included as necessary. A schedule of milestones and deadlines should be specified for the completion of various work elements, including information collection, interviews, surveys, analyses, written quarterly progress reports, preliminary drafts for review, and final draft reports. Monthly call-ins with ARC staff are also required.

4. **Key Personnel**

Personnel performing the research must be described in this section, including the number of people and their professional classifications (e.g., project director, economist, analyst, business consultant, etc.). Brief resumes of the education and relevant experience of the principal investigator, co-investigator, and other key personnel are required. The selected contractor will be required to furnish the services of those identified in the proposal as key personnel. Any change in key personnel is subject to approval by ARC.

B. Management Proposal

The resource capability and program management for planning and performing the research will be considered in the proposal selection process.

1. **Business Management Organization and Personnel**

Furnish a brief narrative description of the organization, including the division or branch planned to perform the proposed effort, and the authority responsible for controlling these resources and personnel.

2. **Staffing Plan**

A staffing plan is required that describes the contractor’s proposed staff distribution to accomplish this work. The staffing plan should present a chart that partitions the time commitment of each professional staff member to the project’s tasks and schedule. In addition, the proposal should include a detailed description of activities for key project-related personnel and anticipated deliverables. Finally, the proposal should identify the relationship of key project personnel to the contracting organization, including consultants and subcontractors.

3. **Relevant Prior Experience**

The proposal must describe the qualifications and experience of the organization and the personnel to be assigned to the project. Information provided should include direct experience with the specific subject-matter area and must provide examples (via web links and/or printed materials) of the three most similar research reports undertaken by the applicant’s organization and the extent to which performance goals were stated and achieved. Provide organization names and addresses, names of contact persons, and telephone numbers for reference.

4. **Contract Agreement Requirements**

This section of the proposal should contain any special requirements that the contractor wants included in the contract.
C. Cost Proposal

Proposals must contain all cost information, including direct labor costs (consistent with the staffing plan), labor overhead costs, transportation, estimated cost of any subcontracts, other direct costs (such as those for databases), university overhead, total direct cost and overhead, and total cost and fee or profit.

ARC requests that the selected contractor formally present and discuss study findings with key Appalachian officials in Washington, D.C. An initial kick-off meeting in Washington, D.C. is also required. These activities will be over and above routine meetings with ARC staff during the course of the project, and the contractor should price its part in this activity separately, assuming travel to two one-day meetings.

VI. Cost and Timing

This is considered a large-scale research project, with a budget of $200K to $249K.

The contract awarded for this research project will be a FIRM FIXED-PRICE CONTRACT, with payments on a quarterly schedule. The contract terms shall remain firm during the project and shall include all charges that may be incurred in fulfilling the terms of the contract.

VII. Copyrights

The Federal Government, through the Appalachian Regional Commission (ARC), reserves a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for federal government purposes, any work developed under a contract, grant, subgrant, or contract under a grant or subgrant, and to use, and authorize others to use for federal government purposes, any copyrights which a grantee, a subgrantee or a contractor purchases with grant support or contract funds. Such license to use includes, but is not limited to, the publication of such work on an ARC Web site and social media. Use of such works for purposes related to Appalachia and the development of Appalachia is generally authorized by ARC to State and local governments in the ARC region and to other public and private not-for-profit organizations serving Appalachia, including the Appalachian Local Development Districts.

VIII. Evaluation of Proposals

All proposals will be evaluated based on the following criteria:

- A complete, clearly articulated, logical study design and technically competent methodology
- Qualifications and relevant prior experience in the fields of program evaluation, public policy, infrastructure development, or other relevant field
- Knowledge of water and wastewater infrastructure programs, especially in rural and/or economically distressed counties
- A credible management proposal for staffing, and the capability to carry out and support the project in a timely fashion
- The quality of interviews, focus group, surveys and/or case study protocols proposed
Cost effectiveness of the proposal

IX. Proposal Submission

Proposals are due on or before the close of business on August 24, 2018.

An original and three hard copies of the proposal must be submitted to:
Katie Whiteman, Program Analyst
Division of Planning and Research
Appalachian Regional Commission
1666 Connecticut Ave., NW, Suite 700
Washington, D.C. 20009-1068

In addition to the hard-copy submission, proposals must also be e-mailed on or before the deadline to kwhiteman@arc.gov. E-mail attachments should be no more than 10 MB.

Questions about this proposal should be directed to Katie Whiteman, Program Analyst at kwhiteman@arc.gov or at 202.884.7756.