



Energy Projects

This document provides specific guidance for **energy projects** per ARC's Strategic Plan Goal 3.3. Applications may involve multiple activities as part of a single project; ARC encourages applicants to review the specific guidance for each type of activity included in an application.

All application guidance is grounded in the goals and principles of [ARC's current strategic plan](#), which emphasize strategic focus, collaboration, sustainability and measurable impact in ARC investments.

Transformational change in energy generation, transmission, distribution, storage, consumption, and conservation is imperative to creating a competitive and resilient economy. ARC investment in energy projects targets a critical need for energy resilience, energy reliability, cost savings, energy efficiency, renewable energy sources, and emission reductions in communities across the Region.

Depending on the nature of the proposal, **energy projects** can be categorized under different goals that are included in ARC's strategic plan. The goals that are most frequently advanced by energy projects include Goal 3 relating to infrastructure and Goal 2 relating to workforce ecosystems.

Examples of eligible energy projects include, but are not limited to:

- New and upgraded basic infrastructure, including electric infrastructure and natural gas infrastructure. This includes investments in electric substations, power lines, transformers, and electric meters. It also includes investments in gas lines, gas compressor stations, and gas meters.
- The deployment of utility-scale energy storage, particularly battery energy storage systems (BESS), to improve energy resilience, energy reliability, and cost savings. The development of or improvement in technology that is used to produce renewable and alternative energy resources, particularly solar photovoltaic (PV) arrays.
- The deployment of microgrids and smart grid technologies that monitor and control distributed generation like solar PV and control distributed storage like batteries.
- The deployment of backup generators to provide energy resilience to critical loads like water and wastewater treatment plants.
- Addressing infrastructure gaps in the availability and reliability of electric vehicle (EV) charging stations throughout the region's vast network of roads and highways.
- Supporting electrification efforts at airports, especially rural airports, and at other transportation nodes.
- Workforce training programs in installing energy technologies and energy efficiency upgrades like weatherization improvements.
- Alternative energy programs or community initiatives, energy efficient infrastructure programs, awareness campaigns, education programs for local officials, conferences
- The development of or improvement in technology that is used to produce conventional energy resources, resulting in reduced emissions including greenhouse gases. One such example is carbon capture.
- Research, planning, and other key analysis activities that serve to identify and underscore project feasibility and potential impact of implementation projects in energy.

Key Principles of ARC Energy Investments

More Information

For general guidance on how to develop a complete and competitive application for ARC project funding, all applicants should refer to the application framework and instructions detailed in the [Checklist for ARC Non-Construction Project Applications](#) form or the [Checklist for ARC Construction Project Applications](#) form, as appropriate, available in the applicant resources section of our website.

Applicants should also consult their ARC State Program Manager*, their state's Appalachian Development Plan* and Annual Strategy Statement* for additional information.

*This information can be found [HERE](#) by navigating to the page and clicking on the appropriate state link.

As outlined in ARC's strategic plan, activities should be strategic, sustainable, collaborative, and impactful.

Strategic:

- Applicants should consider how proposed projects will address problems with existing systems or take advantage of unmet need or opportunity in the area of project impact.
- Project proposals should indicate a strong familiarity with data on current energy systems (coverage, costs, impact, etc.), number of households and businesses served in service area, industry expansion and impacts on employment, planned developments – any factor that demonstrates a project's need or demand.
- Project design should consider other regional systems and be part of an integrated approach to improve energy efficiency and conservation, rather than operate as a closed, independent system.
- Project design should reflect awareness of the links between adequate energy and utility infrastructure and economic development opportunity.

Sustainable:

- Projects should be designed to become self-sustaining after the ARC grant period has closed. Applicants need to consider how the project will be maintained after ARC funds are used and address other factors that could affect sustainability.
- Qualified staff and on-going financial resources are imperative to project sustainability and need to be well documented in the project narrative through an asset management plan (e.g., a five-year pro forma financial projections).
- Applicants should assess whether ARC investment in the project could be used to effectively leverage more resources from state or federal programs, private foundations, or public and private enterprises.

Collaborative:

- Any community or group that has interest in or will benefit from a proposed project are natural partners and should be offered a role in project planning.
- Some partners may participate in the project's financing, implementation, or administration, and may be brought in as partners through contract or procurement. Examples include engineering firms providing preliminary budget reports, planning districts, county boards, businesses, organizations, and institutions that will benefit after the project is completed.

Impactful:

- All project proposals should include performance targets. Applicants should refer to ARC's Guide to Performance Measures at <https://www.arc.gov/resource/guide-to-arc-project-performance-measures/> for information on determining appropriate project measures.
- All measures must be trackable. Applications should include an estimate of appropriate performance measures that will be achieved at the time of or within three (3) years of the project's completion. Current impacts are reported at the time of project close-out.
- Typical efficiency, output, and outcome measures for energy projects include specific infrastructure calculations:
 - Ex. 1: # of linear feet to be installed of power lines or gas lines.
 - Ex. 2: kW related to the nameplate capacity of electric generation or electric storage systems.
 - Ex. 3: kilowatt hours (kWh) related to electric output of batteries or backup generators, electricity flow in power lines, or electricity usage in EV charging stations.
 - Ex. 4: businesses and jobs created or retained, leveraged private investment (LPI), communities served and improved. If job creation/retention or LPI dollars are part of the performance targets, letters from affected businesses are required.
 - Ex. 5: households (residential customers) served and improved as well as businesses (commercial and industrial customers) served and improved.
 - Ex. 6: cost savings or increased revenues from renewable energy or from energy storage.
 - Ex. 7: number of EV charging station users.

Other Considerations

- Costs associated with energy infrastructure projects are often higher than anticipated and delays in obtaining necessary materials are frequent. These contingencies should be factored into the project budget and schedule and anticipated as likely challenges.
- Projects intended to increase a utility's resiliency to natural disaster, security breach, staff turnover, unexpected economic downturn, or other crisis must pair general benefits (i.e., reducing the likelihood of negative impacts) with clear ARC Performance Measures as described under the Impactful section.

Basic Agency Requirements (For Construction Projects Only)

ARC does not administer any construction projects, including those involving energy. ARC operates in partnership with federal and state agencies under an MOU to manage federal construction grants throughout the region.

It is the applicant's responsibility to secure a letter from the appropriate federal or state agency, known as a basic agency letter, indicating their willingness to administer ARC funds for any proposed infrastructure project. A list of eligible basic agencies can be found at <https://www.arc.gov/basic-agency-partners/>.

Grantees are encouraged to reach out directly to their basic agency to ensure the proposed implementation scope and schedule is acceptable to the basic agency prior to submitting the construction grant application.

ARC's Regional Energy Hub Initiative

Those involved in the energy industry may want to consider a current initiative designed to prioritize specific activities related to the storage of natural gas and natural gas liquids in Appalachia. Eligible projects and activities include:

- Research and analysis of the economic impact of a large-scale ethane storage hub that supports a more effective energy market.
- Significant contributions to economic resiliency through project implementation.
- Establishment of a regional energy hub in the Appalachian region for natural gas and natural gas liquids, including hydrogen produced from the steam methane reforming of natural gas feedstocks.

Please see <https://www.arc.gov/energyhub/> for more information.

Additional Resources

- ARC's Current Strategic Plan <https://www.arc.gov/wp-content/uploads/2022/01/Appalachia-Envisioned-ARC-Strategic-Plan-FY-2022-2026.pdf>
- ARC Applicant Resources: <https://www.arc.gov/applicant-resources/>
- Information Specific to ARC States: <https://www.arc.gov/appalachian-states/>
- Investments in Action: <https://www.arc.gov/investment/frostburg-state-university-advancing-technology-in-western-maryland/>