

Guide to ARC Project Performance Measures – Energy/Utilities/Smart Grid Projects

Standalone Measures

| Businesses Created <i>Outcome</i> | |
|---|--|
| Definition | The number of new businesses created as a result of an ARC project |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of truly new businesses that were created as a result of the utility being provided |
| Typical timeframe | Up to 3 years after grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • For this measure, applicants must submit a letter from the company or companies promising new business to be created. • This measure should only be used to measure new business creation, not the number of existing businesses recruited or otherwise relocated from other areas. |

| Gas—Million Cubic Feet (MMCF) <i>Output</i> | |
|---|--|
| Definition | The fixed storage capacity of a gas pipeline or a gas system in millions of cubic feet |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of cubic feet |
| Typical timeframe | By grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • This measure may be expressed in decimals. • This is a standard industry measure. Energy units are either standing still (storage) or moving (rate per day). For storage, use this measure. For rate per day, use Gas—Million Cubic Feet Per Day (MMCFD). |

| Gas—Million Cubic Feet Per Day (MMCFD) <i>Output</i> | |
|--|---|
| Definition | The flow capacity of a gas pipeline or gas system, in millions of cubic feet per day |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of cubic feet per day |
| Typical timeframe | By grant closeout |

| Gas—Million Cubic Feet Per Day (MMCFD) | |
|---|---|
| <i>Output</i> | |
| Additional guidance | <ul style="list-style-type: none"> • This measure includes the flow capacity of a new gas pipeline or system, or the increase in flow capacity of an existing gas pipeline or system due to renovation, new equipment, or other improvements. • This measure may be expressed in decimals. • This is a standard industry measure. Energy units are either standing still (storage) or moving (rate per day). For storage, use Gas—Million Cubic Feet (MMCF). For rate per day, use this measure. |

| Heat—Million BTU (MMBTU) | |
|------------------------------------|--|
| <i>Output</i> | |
| Definition | The fixed heating capacity of an energy system, including a gas system, in millions of British Thermal Units (BTUs) |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of BTUs |
| Typical timeframe | By grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • This measure may be expressed in decimals. • This is a standard industry measure. Energy units are either standing still (storage) or moving (rate per day). For storage, use this measure. For rate per day, use this measure. |

| Heat Million BTU Per Day (MMBTUD) | |
|--|---|
| <i>Output</i> | |
| Definition | The capacity of heat flow generated, transmitted, consumed, or conserved by an energy system, including a gas system, in millions of British Thermal Units (BTUs) per day |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of BTUs per day |
| Typical timeframe | By grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • This measure includes the heat flow capacity of a new combined heating and power (CHP) system. It also includes the increase in heat flow capacity of an existing HVAC system or the reduction in heat consumption by a facility due to renovation, new equipment, energy efficiency measures, or other improvements. • This measure may be expressed in decimals. • This is a standard industry measure. Energy units are either standing still (storage) or moving (rate per day). For storage, use Heat—Million BTU (MMBTU). For rate per day, use this measure. |

| Jobs Created <i>Outcome</i> | |
|---------------------------------------|---|
| Definition | The number of jobs created (direct hires, excluding construction jobs) as a result of an ARC project, measured during the project period and up to three years after the project end date |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of jobs created |
| Typical timeframe | Up to 3 years after grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • Both “jobs created at the utility” and “jobs created at businesses” as a result of the ARC project may be counted. • Part-time and seasonal jobs should be converted to full-time equivalents. Employers must provide letters explicitly stating the number of jobs created. |

| Jobs Retained <i>Outcome</i> | |
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| Definition | The number of existing jobs that would be lost or relocated if the ARC project were not undertaken |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of jobs retained, expressed as full-time equivalents |
| Typical timeframe | Up to 3 years after grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • Applicants must submit a signed letter from the employer(s) verifying number of FTE jobs* to be retained; include references to evidence that these jobs would be relocated without the project. • If a business is staying due to the completion of the project, all employees working at that business location may be counted in ‘Jobs Retained’. Both “jobs retained at the utility” and “jobs retained at businesses” as a result of the ARC project may be counted. • Existing jobs benefiting from an infrastructure or local access road upgrade cannot be counted as jobs retained. <p>*Part-time and seasonal jobs should be converted to full-time equivalents (FTE).</p> |

| Leveraged Private Investment <i>Outcome</i> | |
|---|--|
| Definition | The dollar amount of private-sector financial commitments, outside of project costs that result from an ARC project |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source. |
| How might this be measured? | Dollar amount of private investment resulting from an ARC project |
| Typical timeframe | Up to 3 years after grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • Investments made by electric cooperatives (which are private businesses) are considered leveraged private investment (LPI), but investments made by a utility (which is a public service) are not. • Applicants must submit a signed letter from the company or investor verifying the amount of LPI. |

| Linear Feet <i>Output</i> | |
|-------------------------------------|---|
| Definition | The number of linear feet of pipe, wire, cable, trails, etc., to be constructed or installed |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of linear feet |
| Typical timeframe | By grant closeout |
| Additional guidance | Drawn from construction plans |

| Plans/Reports <i>Output</i> | |
|---------------------------------------|--|
| Definition | The number of plans or reports developed as a result of an ARC project |
| Example grant activities | Feasibility study, plan, engineering design, comprehensive plan, etc. |
| How might this be measured? | Number of plans/reports |
| Typical timeframe | By grant closeout |
| Additional guidance | Engineering/architecture plans for construction are not counted as plans/reports. If the plan/report has different purposes/scopes, there can be several plans as part of a project. |

| Power—Kilowatt-Hours (kWh) <i>Output</i> | |
|--|--|
| Definition | The capacity of power flow generated, transmitted, distributed, consumed, or conserved by an energy system, in kilowatt-hours |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of kilowatt-hours |
| Typical timeframe | By grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • This measure includes the flow capacity of a new power plant or new power line. It also includes the increase in power flow capacity of an electric grid or the reduction in power consumption by a facility due to renovation, new equipment, energy efficiency measures, or other improvements. This measure may be expressed in decimals. • Standard industry measure. Energy units are either standing still (storage) or moving (rate per year). For storage, use this measure. For rate per day, use Power—Kilowatt-Hours Per Year (kWh). |

| Power—Kilowatt-hours Per Year (kWh) <i>Output</i> | |
|---|--|
| Definition | The capacity of power flow generated, transmitted, distributed, consumed, or conserved by an energy system, in kilowatt-hours per year |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Number of kilowatt-hours per year |
| Typical timeframe | By grant closeout |

| Power—Kilowatt-hours Per Year (kWh) | |
|--|--|
| <i>Output</i> | |
| Additional guidance | <ul style="list-style-type: none"> • This includes the flow capacity of a new power plant or new power line. It also includes the increase in power flow capacity of an electric grid or the reduction in power consumption by a facility due to renovation, new equipment, energy efficiency measures, or other improvements. • This measure may be expressed in decimals. • Standard industry measure. Energy units are either standing still (storage) or moving (rate per year). For storage, use Power—Kilowatt-Hours (kWh). For rate per day, use this measure. |

| Programs Implemented | |
|------------------------------------|---|
| <i>Outcome</i> | |
| Definition | The number of new programs which are implemented as a result of an ARC project |
| Example grant activities | Alternative energy program or community initiative, energy efficient infrastructure program, awareness campaign, education program for local officials, conferences |
| How might this be measured? | The number of activities (educational courses, marketing campaigns, energy efficiency opportunity, etc.) that result in other tangible performance measures (participants served, costs reduced, waste reduced, etc.) |
| Typical timeframe | Up to 3 years after grant closeout |
| Additional guidance | If possible, use with other measures that indicate the results of the project, such as students, workers, participants, costs reduced, waste reduced/reused/recycled, etc. |

| Revenues Increased—Non-Export | |
|--------------------------------------|--|
| <i>Outcome</i> | |
| Definition | The increase in revenue in domestic (non-export) sales realized by a business, in this case a utility, as a result of an ARC project, showing sustainability over time |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source |
| How might this be measured? | Increase in annual revenues to utilities as a result of new customers and/or more efficient service to existing customers |
| Typical timeframe | Up to 3 years after grant closeout |
| Additional guidance | |

| Waste—Tons Reduced/Reused Recycled | |
|---|--|
| <i>Output</i> | |
| Definition | The number of tons of waste reduced, reused, or recycled at a landfill, brownfield site, or recycling center |
| Example grant activities | Construction work at a waste processing facility |
| How might this be measured? | Number of tons of waste reduced/reused/recycled |
| Typical timeframe | Up to 3 years after grant closeout |

| Waste—Tons Reduced/Reused/Recycled <i>Output</i> | |
|--|---|
| Additional guidance | <ul style="list-style-type: none"> • This includes the flow capacity of a new waste-to-energy plant, or the increase in flow capacity of an existing landfill or recycling center due to renovation, new equipment, or other improvements. • This measure may be expressed in decimals. • Standard industry measure. Energy units are either standing still (storage) or moving (rate per day). For storage, use this measure. For rate per day, use Waste—Tons Per Day Reduced/Reused/Recycled (TPD). |

| Waste—Tons Per Day Reduced/Reused/Recycled (TPD) <i>Output</i> | |
|--|---|
| Definition | The flow capacity of waste reduced/reused/recycled by a waste processing facility |
| Example grant activities | Construction work at a waste processing facility |
| How might this be measured? | Number of tons of waste reduced/reused/recycled per day |
| Typical timeframe | Up to 3 years after grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • This includes the flow capacity of a new waste-to-energy plant, or the increase in flow capacity of an existing landfill or recycling center due to renovation, new equipment, or other improvements. • This measure may be expressed in decimals. • Standard industry measure. Energy units are either standing still (storage) or moving (rate per day). For storage, use Waste—Tons Reduced/Reused/Recycled. For rate per day, use this measure. |

Paired Measures

| | Businesses Served <i>Output</i> | Businesses Improved <i>Outcome</i> |
|------------------------------------|--|---|
| Definition | The number of businesses served or impacted by an ARC project | The number of businesses with a measurable improvement as a result of an ARC project |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source | |
| How might this be measured? | Number of businesses in the area that could potentially connect to the new utility or benefit from improvements to the existing one | Number of businesses in the area that have improved service/expanded capabilities, number of commercial customers of the utility |
| Typical timeframe | By grant closeout | Up to 3 years after grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • Do not assume that all businesses in a town are going to have the opportunity to connect to the utility. • If the number of businesses served is equivalent to all businesses in the town, use “communities served” and | <ul style="list-style-type: none"> • To count a business as improved, verify that it connected to the new/improved service. • For new service infrastructure projects, the output (served) is the number of non-residential entities with access to the infrastructure service, while the outcome (improved) is the number of non-residential |

| | Businesses Served <i>Output</i> | Businesses Improved <i>Outcome</i> |
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| | “communities improved” instead. | customers that are connected to the infrastructure service. For improved service projects (e.g., improvements in health or safety, compliance with environmental quality, improved water pressure), all non-residential customers served are also considered “improved.” |

| | Communities Served <i>Output</i> | Communities Improved <i>Outcome</i> |
|------------------------------------|---|---|
| Definition | The number of communities served or impacted by an ARC project | The number of communities with a measurable improvement as a result of an ARC project |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source | |
| How might this be measured? | Number of communities that could potentially be connected to the new utility | <ul style="list-style-type: none"> • Number of neighborhoods or municipalities connected to the new utility and experienced positive changes to their service; number of cities or counties that use utility service • This could be achieved through a survey. |
| Typical timeframe | By grant closeout | Up to 3 years after grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • “Communities” generally refers to numbers of counties and municipalities, but the grantee can provide justification for a different definition (neighborhoods, specific jurisdictions, etc.) • If all households and businesses in a community will be impacted, use “communities served” instead. | |

| | Households Served <i>Output</i> | Households Improved <i>Outcome</i> |
|------------------------------------|--|--|
| Definition | The number of households served by an ARC infrastructure project | The number of households with measurable improvement as a result of an ARC project |
| Example grant activities | Construction of lines or grids; connections to electricity, natural gas, or other energy source. | |
| How might this be measured? | <ul style="list-style-type: none"> • The number of households with access to new service (e.g., water, sewer, gas line, or telecommunications) or improved service (e.g., improvements in health or safety, compliance with | <ul style="list-style-type: none"> • The number of residential customers that are connected to the infrastructure service. • For improved service projects (e.g., improvements in health or safety, compliance with environmental quality, improved water pressure), all |

| | Households Served <i>Output</i> | Households Improved <i>Outcome</i> |
|----------------------------|---|--|
| | <p>environmental quality, improved water pressure).</p> <ul style="list-style-type: none"> • A survey of households in the area or municipal maps/construction schematics. | <p>residential customers served are also considered “improved.”</p> <ul style="list-style-type: none"> • A survey of households connected to the service or who have experienced decreased bills as a result of improvements. |
| Typical timeframe | By grant closeout | Up to 3 years after grant closeout |
| Additional guidance | <ul style="list-style-type: none"> • Only households that will have the ability to connect to the new service should be counted. • If all households in a community will be impacted, use communities served instead. | Do not count all households served as “improved” without providing a rationale. |