



Larry Hogan, *Governor*
Boyd K. Rutherford, *Lt. Governor*
Mary Beth Tung, *Director*

Funding Opportunity Announcement FY22 Resilient Maryland Grant Program

Program Description: The Maryland Energy Administration (MEA) is pleased to announce the FY22 Resilient Maryland program (the Program). Resilient Maryland is a **competitive grant program** that provides Maryland essential businesses, critical infrastructure, State and local government facilities, communities experiencing vulnerabilities, and other organizations with funds to offset the costs of conducting feasibility analyses, planning, design, and other critical preconstruction planning activities for microgrids and other distributed energy resource (DER) systems that enhance the resilience, sustainability, and efficiency of their facilities.

The FY22 Program will focus on encouraging the development of Microgrids and DER systems that employ creative, innovative, and market-transformative solutions. Successful proposals will consider emerging and innovative technologies with market potential; demonstrate the ability to efficiently mobilize available capital to deliver the lowest cost Microgrid/DER system, which provides greatest value to its offtaker(s); enhance energy equity to communities and populations experiencing vulnerabilities; and maximize the reduction of greenhouse gas emissions. MEA also seeks projects through this program that deploy distributed energy solutions to new types of applications.

FY22 Resilient Maryland grants will be awarded under three (3) Areas of Interest (AOIs):

- **AOI 1: Community & Campus Microgrids:** This AOI provides funds for conducting feasibility analyses, planning activities, preliminary designs, financial analyses, greenhouse gas reduction projections, analyses on barriers to system implementation (such as legal, strategic, geographic, etc.), and other preconstruction activities for community and campus-scale microgrids and other innovative configurations that benefit more than one facility. Ideal projects under this AOI will consider the integration of multiple DERs in innovative or market-transformative ways to bring enhanced energy resilience, increased energy efficiency, and more sustainability to the facilities and/or services they are designed to support. See the Definition section of this FOA for more information on what is considered a Microgrid and eligible DER. See the Evaluation Criteria section for more information on requirements.
- **AOI 2: Resilient Facility Power Systems:** This AOI provides funds for conducting feasibility analyses, planning activities, preliminary designs, financial analyses, greenhouse gas reduction projections, analyses on barriers to system implementation (such as legal, strategic, geographic, etc.), and other preconstruction activities for a single facility. Ideal projects under this AOI will consider one or more DER systems that maximize potential benefit to the facility, including resilience, greenhouse gas reduction, and energy cost reduction. MEA highly encourages novel projects that demonstrate innovative and creative solutions (technical considerations, capital funding, ownership models, and/or objectives the system is designed

to accomplish). See the Definition section of this FOA for more information on what is considered a Resilient Facility Power System and eligible DER. See the Evaluation Criteria section for more information on requirements.

- **AOI 3: Resiliency Hubs:** A Resiliency Hub is a nearby, localized community facility with sufficient space for community members to safely congregate in times of grid outage or disaster and which is fitted with a solar PV and battery storage system sufficiently sized to power essential loads during an electricity grid outage. See the Definitions section of this FOA for a full definition. **Projects under this AOI must be designed to conform with the requirements of MEA's [Resiliency Hub Grant Program](#)¹, which provides grant funds for the installation of solar PV and battery storage system components for resiliency hubs in communities experiencing low to moderate income.** See the Evaluation Criteria section for more information on requirements. Recipients of AOI 3 Resilient Maryland awards are encouraged to apply to MEA's Resiliency Hub Grant Program upon completion of a resiliency hub's planning, engineering and design.

Type of Grant Program: Competitive

Application Deadline: Thursday, November 18, 2021, 5:00 P.M. EST

Definitions: The following definitions are referenced throughout this FOA.

- **Campus:** A single parcel or multiple adjacent parcels of real property located within the State of Maryland upon which at least two (2) buildings are currently, or will be, fully constructed.
- **Community:** A County, Baltimore City, an incorporated or unincorporated community, or geographically-connected subset of these jurisdictions (e.g. a single city block or collection of blocks) in which the Facility or Facilities to be served by the project are located.
- **Communities and Populations Experiencing Vulnerabilities:** A Maryland Community or localized population of individuals experiencing vulnerabilities which have caused disproportionate negative impacts on quality of life and access to affordable, reliable, clean energy. These vulnerabilities can be broad and specific to a community or population and should be specifically defined by the community or population.
- **Distributed Energy Resource (DER):** Distributed energy generation, which includes but is not limited to: solar photovoltaic (PV) systems, energy storage systems (battery, thermal, mechanical, etc.), and combined heat and power (CHP) systems. Also included are electric vehicle (EV) chargers, alternative fuel infrastructure, grid-interactive energy efficiency technologies, energy system controllers, and others deemed appropriate by MEA on a case-by-case basis.
- **Facility:** A single building located on a single parcel or multiple adjacent parcels of real property that is either owned or leased whole or in part by the Applicant organization.
- **Microgrid:** An interconnected system of distributed energy resources and associated

¹ <https://energy.maryland.gov/Pages/Resiliency-Hub.aspx>

distribution infrastructure and control system(s) that provides electricity and may provide thermal energy to a Community, Campus, or collection of Facilities. The Microgrid must be able to operate independent of the utility grid.

- **Resiliency Hub:** A facility designed and designated by a local community to serve as a point of safe co-location during a grid outage or emergency event which, at minimum, provides reliable electricity for the following loads: emergency lighting, charging of personal electronic devices such as cell phones and laptop computers, essential portable medical equipment such as continuous positive airway pressure (CPAP) and dialysis machines, refrigeration for temperature-sensitive medications and other items (this does NOT include food storage), and dedicated conditioned space for community members to remain in safe and healthy temperatures during extreme temperature events. A Resiliency Hub must have a 50 percent probability of powering these loads for a minimum of three (3) consecutive days following a power outage. A Resiliency Hub is NOT a replacement for an emergency shelter as it is not required to be designed to survive extreme weather. It is also not required to have food service capabilities, showers, or locker rooms. However, an emergency shelter that does provide these services is still eligible to apply to the Resilient Maryland and Resiliency Hub Grant programs.
- **Resilient Facility Power System:** One or more distributed energy resources configured to work together to serve a single Facility. The system must be able to operate independent of the utility grid.

Eligible Applicants: The Resilient Maryland program is open to Maryland public and private entities with facilities located within the State of Maryland. Eligible organizations must be registered to do business in, or have authority to, operate within the State of Maryland. Generally, these include but are not limited to the following:

- Businesses
- Nonprofit organizations
- State government departments and agencies
- Local governments
- Critical infrastructure facilities
- Hospitals and healthcare facilities
- Multifamily housing
- Agriculture and food production/supply chain
- Hotels and hospitality
- Regional planning organizations

Individual Maryland residents are **not eligible** for Resilient Maryland grants.

Eligible Activities: Resilient Maryland funds are provided to awardees to help offset the costs of feasibility analysis, planning, design, and other preconstruction activities for DER systems. Generally, these preconstruction activities include but are not limited to those listed below.

Eligible Preconstruction Activities

- Feasibility studies
- Engineering, project configuration(s), and design drawings
- Pro forma financial modeling
- Greenhouse gas reduction projections
- Analysis of barriers to DER system implementation (logistical, legal, geographic, etc.)

Program Budget: \$420,000 - See the Award Formula section of this FOA for information on how award amounts are calculated.

Evaluation Criteria: All projects must meet the Minimum Eligibility Criteria listed at the end of this FOA to be considered for an award. Upon meeting these criteria, each eligible project will be evaluated using the Evaluation Criteria below. The highest-scoring proposals will be awarded, subject to the program's funding availability.

Criterion	Description	Weight
Value Proposition	Applicant's proposal delivers a detailed description of the facilities to be served by the DER system and makes a strong and detailed case for the quantifiable and qualitative benefits and values delivered by the project to the community, campus, facilities, and, as applicable, the general public. A proposal that directly involves the party(ies) that the potential DER system would benefit <u>and</u> the local electric utility in its development <u>will be looked upon more favorably</u> than one that does not.	40%
Energy Resilience	The proposed DER system enhances the resilience of the facilities that it is designed to serve. Successful projects will include DERs that allow the system to operate connected loads in the absence of electricity grid power (e.g. battery storage with solar PV, thermal storage systems, CHP systems that can black start and island, etc.). Projects that prioritize loads in order of criticality and maximize probability of duration of power during grid outage will be ranked more favorably.	20%
Creative Solutions	The proposed DER project proposes to pursue new and promising DER system configurations, ownership models, innovative	10%

	<p>technologies, and solution strategies. Additionally, the proposed project should show potential to be replicable, scalable, and marketable. Successful projects will ideally propose systems and solutions that consider new applications of DER systems, unique and innovative combinations of DERs not funded in prior program years, and/or unique approaches to project financing. Read about FY21 projects on the Resilient Maryland webpage².</p>	
Energy Best Practices	<p>The proposed project follows the “Energy Best Practices” approach. This means that loads are made energy efficient and weatherized prior to sizing energy generation systems, and that the DER selection minimizes the emission of greenhouse gases from the associated energy production. Ideally, a successful project will include comprehensive energy efficiency and weatherization measures and will maximize the greenhouse gas reduction benefits.</p>	10%
Energy Equity	<p>The proposed project will enhance energy equity to Maryland communities experiencing vulnerabilities and disproportionately high energy burdens. A successful project will propose solutions that reduce the energy cost burden of these Marylanders or to the facilities which serve them, improve access to key services during grid outage situations, improve access to reliable power, and improve local air quality (e.g. solar PV and battery systems, CHP systems that sequester greenhouse gases and minimize emission to the surrounding environment, etc.).</p>	10%
Partnerships	<p>The proposed project will include partnerships that help to assure that delivering “best value” to the project’s stakeholders is prioritized. Such partnerships should include representatives with relevant community, academic, regulatory, and/or industry expertise and insight conducive to the project’s success, including but not limited to the surrounding community, the local electric</p>	10%

² <https://energy.maryland.gov/business/Pages/ResilientMaryland.aspx>.

	distribution grid, and DER system offtakers, as applicable. Applicants are highly encouraged to engage the local utility/utilities as (a) partner(s). Examples of project partners include but are not limited to government entities, universities, nonprofit organizations, community advocacy organizations, etc.	
--	---	--

Geographic Diversity: Please note that, in order to enhance geographic diversity, MEA reserves the right to consider a project’s location within the State when determining an award decision.

Review Process: Proposals will be evaluated competitively. Reviews will be conducted by a Review Team, which will primarily be composed of MEA staff and may include external State agency staff with relevant experience. Each Review Team member will review and score each complete application. The Review Team will then meet to jointly discuss findings and, subsequently will make a final decision on recommendation to the Director regarding grant awards. Recommendations for award will be based on the results of individual reviews.

Award Formula: Awards will be made in each AOI as described in the table below. Please note that these are **maximum** award amounts, based on funding availability of the program. Applicants may request lower amounts but under no circumstances will MEA grant funds in excess of the maximum awards listed for each AOI.

Area of Interest	Maximum Award Amount
AOI 1: Microgrids and Resilient DER Systems	\$100,000 total
AOI 2: Resilient Facility Power Systems	\$25,000 total
AOI 3: Resiliency Hubs	\$10,000 per hub

Partial awards: Partial awards may be awarded under this program, depending on the number of complete proposals received and associated total grant funds requested. Full grant awards will be made for approved projects, based on rankings of applications, in descending order from highest-to lowest, until grant funds are exhausted. If sufficient grant funds are not available to fully fund a project, the applicant will be given an option to accept partial funding, based on the ability to complete the project with partial grant funding. If the Applicant declines, MEA will offer award partial grant funding under this same structure to the next qualified Applicant until all funding has been expended or all remaining projects have rejected the offer.

Required Application Documents: To be considered **complete**, an application to the Resilient Maryland program must include the following documents. Failure to submit any of the required documents will result in rejection of the application.

AOI 1 and AOI 2 Project Application - Required Documents: This section **does not apply to AOI 3 projects**. AOI 3 project application requirements are provided in the AOI 3 Project Application - Required Documents section below.

- A **complete** FY22 Resilient Maryland Application Form, **signed by an authorized designee of the Applicant organization**. Applications signed only by a third party, such as a project developer, contractor, or vendor, will **not** be accepted.
- A detailed **Project Proposal**, which includes the following information:
 - Executive Summary
 - Description of the Community, Campus, or Facilities that will be served by the Microgrid or Resilient Facility Power System
 - Description of the loads to be served by the Microgrid/DER system
 - Description of any energy efficiency and/or weatherization measures completed within the past five (5) years, **AND/OR** a description of energy efficiency/weatherization measures planned in the immediate future
 - Description of the Microgrid/DER system option or options to be explored
 - Explanation of how the proposed project meets the Evaluation Criteria of this FOA
 - Description of each final deliverable that the Resilient Maryland grant, if awarded, would fund (e.g. feasibility study, engineering models, pro formas, greenhouse gas reduction analysis, implementation barrier analysis, etc.)
 - Detailed budget for the project (i.e, costs for which grantee will be seeking reimbursement under a grant)
 - Anticipated project completion timeline, assuming the project commences on or after May 31, 2022 (projected final date on which Resilient Maryland grants can be executed)
 - Names, titles, and organizational affiliations of individuals anticipated to be on the project team; or, if these individuals are unknown at the time of application, the names of the organizations with representatives on the project team(e.g. Applicant organization, electric utility company, local emergency management office, etc.)
- A complete, current, accurate, and signed **IRS Form W9 for the Applicant organization**.

AOI 3 Project Application - Required Documents: This section **is not for AOI 1 or AOI 2 projects**. AOI 1 and AOI 2 project application requirements are provided in the AOI 1 and AOI 2 Project Application - Required Documents section above.

- A **complete** FY22 Resilient Maryland Application Form, **signed by an authorized designee of the Applicant organization**. Applications signed only by a third party, such as a project developer, contractor, or vendor, will **not** be accepted.
- A detailed **Project Proposal**, which includes the following information:
 - Executive Summary
 - Description of the facility that will serve as the Resiliency Hub
 - General location and estimated number of plug outlets that will be available for community use to charge personal electronic devices such as mobile phones and laptop computers

- General location and estimated number of plug outlets that will be designated exclusively for portable essential medical equipment such as CPAP and dialysis machines
- Description of the anticipated dedicated space within the resiliency hub that will provide conditioned air at safe temperatures for community members
- Anticipated refrigerator capacity available for temperature-sensitive medications and other items
- Description of any energy efficiency and/or weatherization measures completed within the past five (5) years, **AND/OR** a description of energy efficiency/weatherization measures planned in the immediate future
- Explanation of how the proposed project meets the Evaluation Criteria of this FOA
- Description of each final deliverable that the Resilient Maryland grant, if awarded, would fund (e.g. feasibility study, engineering models, pro formas, greenhouse gas reduction analysis, implementation barrier analysis, etc.)
- Detailed budget for the expenditure of the requested grant funds
- Anticipated project completion timeline, assuming the project commences on or after May 31, 2022 (projected final date on which Resilient Maryland grants can be executed)
- Names, titles, and organizational affiliations of individuals anticipated to be on the project team; or, if these individuals are unknown at the time of application, the names of the organizations with representatives on the project team (e.g. Applicant organization, electric utility company, local emergency management office, etc.)
- A complete, current, accurate, and signed **IRS Form W9 for the Applicant organization.**

Grant Program General Provisions: MEA grant programs are covered by general requirements that will be made part of the grant agreement between MEA and a grantee. A copy of the General Provisions document is available on [MEA's website](#)³; this document will be incorporated into all MEA FY22 grant agreements.

In addition to the general provisions, the following funding qualification applies to this program:

- MEA reserves the right to obligate all or none of the FY22 Resilient Maryland program budget, based on the quality and eligibility of applications submitted to MEA.

Project Eligibility Criteria: Each Resilient Maryland project **must meet the following eligibility criteria** to be considered for a grant award:

- **Site Location:** The site for any proposed DER system must be located within the State of Maryland.
- **Eligible System and Facility Types:** The preconstruction planning activities must be for the proposed installation of a Microgrid, Resilient Facility Power System, Advanced CHP system, or Resiliency Hub to serve one or more Maryland Facility, a Campus, or a Community, as applicable and as defined by the Definitions section of this FOA.
- **DER Restrictions:** Proposed DER systems that are fueled by hydrocarbon fuel sources other than natural gas for CHP systems implemented for energy resilience purposes; or diesel fuel

³ <https://energy.maryland.gov/Pages/all-incentives.aspx>

for emergency standby generators, **will not be considered** for grant award under the Resilient Maryland program.

- **Historical Properties:** The proposed DER system must not have an adverse effect on the historical significance of the property, as determined by the Maryland Historic Trust.
- **Prior Recipients Prohibition:** A proposed DER system funded by a prior Resilient Maryland award will not be considered for grant award the Resilient Maryland program.
- **Prior Expenses Restriction:** Resilient Maryland funds cannot be used to offset costs that were incurred prior to the filing of an application with the Resilient Maryland program.
- **Applicant Contribution:** The Applicant must contribute at least fifteen percent (15%) of the total cost of the project. This may be done in the form of cost-match, contributed labor, or a combination thereof.
- **Good Standing Requirements:** Non-governmental project developers, site owners, and system owners must be in Good Standing with the [Maryland State Department of Assessments and Taxation \(SDAT\)](#)⁴. Applicants may supply evidence of Good Standing in one of two ways: (1) by supplying a screenshot or PDF of the organization's status as returned in SDAT's [Business Entity Search](#)⁵, or by supplying its Certificate of Status, [available from SDAT here](#)⁶.
- **Signature Requirements:** An authorized representative of the building owner and the project development organization, **if known at the time of application**, must sign the Application Form. If the development organization is selected after the Resilient Maryland grant is awarded, the development organization must review this FOA and submit a signed letter on organization letterhead indicating that it has reviewed the FOA and agrees with all requirements contained within it prior to the execution of a grant agreement.

AOI 3 Project-specific Requirements (AOI 3 PROJECTS ONLY - the following do not apply to AOI 1 or AOI 2 projects): As part of the requirements of a Grant Agreement, an AOI 3 project must demonstrate the following:

- **NABCEP Requirement:** At least one (1) [North American Board of Certified Energy Practitioners \(NABCEP\)](#)⁷ PV Installation Professional or PV Design Specialist must be employed and involved in the feasibility analysis and design of the proposed Resiliency Hub.
- **Minimum System Requirements:** The preconstruction activities must address with reasonable certainty whether the proposed Resiliency Hub will be able to meet the following minimum requirements under MEA's Resiliency Hub Grant Program, which include:
 - Must be able to provide emergency lighting during grid outage events;
 - Must have dedicated plug outlets for community members to charge personal electronic devices such as phones and laptops;
 - Must have dedicated plug outlets for essential portable medical equipment such as continuous positive airway pressure (CPAP) and dialysis machines;
 - Must have a dedicated conditioned space that maintains a safe and healthy ambient temperature for community members to congregate within during extreme temperature events;

⁴ <https://dat.maryland.gov/Pages/default.aspx>

⁵ <https://egov.maryland.gov/businessexpress/entitysearch>

⁶ <https://dat.maryland.gov/businesses/Pages/Internet-Certificate-of-Status.aspx>

⁷ <https://www.nabcep.org/>

- Must provide refrigeration capacity for temperature-sensitive medications and other essential temperature-sensitive items (this does NOT include food);
- Must utilize solar PV and battery storage as the primary DER system configuration; and
- Must be designed to have a 50 percent probability of maintaining power to the above electricity loads for a minimum of three (3) consecutive days.
- **Allowable DERs:** Any Resiliency Hub studied under this AOI primarily must consider solar PV and battery storage systems as DERs for installation. The integration of backup diesel or natural gas-fired generators is permitted, but they **cannot** be the primary DERs.
- **Primary System Uses:** The primary uses for the proposed Resiliency Hub should be to provide solar energy to the facility, as well as peak shaving to reduce demand charges. Utilizing the system for other purposes (such as frequency regulation) are permitted if the system will operate under an authorized utility tariff. Regardless of the routine system use, the battery must be designed to reach and maintain at least a 90 percent charge prior to any known storm or weather condition that might be expected to cause a power outage (e.g. hurricane, severe thunderstorm, derecho, blizzard, ice storm, etc.).
- **Interconnection Restriction:** A proposed Resiliency Hub **must be able to connect to the distribution grid serving Maryland** and to register for Solar Renewable Energy Certificates (SRECs). For information on SREC registration, visit the [PJM EIS website](#)⁸.
- **Minimum Site Commitment:** In the event that the Resiliency Hub is ultimately installed, the owner of the facility for the proposed Resiliency Hub must agree to maintain the facility as a Resiliency Hub for at least 5 years.

Submission Instructions: Once complete, Application packages should be submitted to MEA electronically via email to RMP.MEA@Maryland.gov. **All documents must be submitted no later than 5:00 P.M. EST, November 18, 2021.** MEA **will not accept** any application packages after this deadline under any circumstances, and all documents received by the deadline will constitute the entire submission. If electronic submission is not possible, an Applicant should contact MEA via email at RMP.MEA@Maryland.gov or by calling Program Manager Brandon Bowser at (443) 306-0304 **no fewer than fourteen (14) days** prior to the November 18 deadline to arrange an alternative method of submission.

Questions can be directed to Brandon Bowser, Energy Resilience Program Manager, via email at BrandonW.Bowser@Maryland.gov or via phone at (443) 306-0304.

⁸ <https://www.pjm-eis.com/>