Maryland Energy Administration

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

Funding Opportunity Announcement
FY22 Resilient Maryland Capital Development (RMCD) Pilot Program

DEADLINE EXTENDED, SEE APPLICATION DEADLINE SECTION BELOW

Program Description: The Maryland Energy Administration (MEA) is pleased to announce the FY22 Resilient Maryland Capital Development Pilot Program (RMCD Pilot Program) that builds on the MEA Resilient Maryland Program to provide grant funds for the construction of comprehensive microgrid projects. Building on the Resilient Maryland Program, MEA plans to award up to three (3) grants to cover the capital expenses for microgrid projects that are "shovel ready", i.e., have already been evaluated for feasibility and have been conceptualized. This competitive grant program will help offset the costs of equipment and installation of the distributed energy resources (DERs) and the associated wiring and communication infrastructure comprising the microgrid.

The RMCD Pilot Program is to incentivize the development of microgrids that enhance the resilience of essential public facilities and infrastructure, improve socioeconomic equity of historically underserved and unserved Marylanders, encourage economic development and job creation, and provide educational and workforce development opportunities for clean energy careers. To be considered for award, a project must be a comprehensive system of DERs that function together to both maximize energy resilience and reliability, manage and optimize energy costs, and enhance community and/or organizational sustainability. The RMCD Pilot Program **is not open to** single-solution DERs or functions, including but not limited to standalone combined heat and power (CHP), standalone solar arrays, or resiliency hubs. However, these single-solution systems and applications may be included as individual components of a comprehensive microgrid system project that addresses multiple outcomes. To be considered, a proposed microgrid **must** be able to demonstrate substantial pre-construction due diligence. For this reason, an **ideal project will be a proposed microgrid that successfully completed feasibility and planning Final Deliverables under MEA's Resilient Maryland Grant program or can demonstrate equivalence**.

Program Purpose: The RMCD Pilot Program's purpose is to help Maryland organizations construct comprehensive microgrids that produce substantial societal benefits for Maryland communities, which can be modeled, replicated, and scaled. More specifically, the Program is focused on funding microgrid projects that enhance both energy resilience and reliability for structures/facilities that provide critical operational and/or functional support for communities and organizations. Examples of such structures/ facilities include but are not limited to community critical infrastructure such as potable water systems, a campus or subset of buildings, or town center containing essential businesses and services. Accordingly, the Program will provide funding only to microgrids that are focused on at least one of the following three (3) key areas of outcome:(1) enhancing resilience and reliability of power for businesses, organizations, and critical infrastructure essential for societal

function and wellbeing; (2) improving quality of life and reducing energy burden for a Maryland community that has been historically underserved or unserved entirely; and (3) creating large-scale educational and economic development opportunities for Maryland students and/or displaced workers to become credentialed for clean energy-focused career paths, and allowing continued operation for facilities that provide substantial employment in surrounding communities.

Funding: A total of $2,000,000 is anticipated to be available, the amount awarded may be more or less, depending on the quantity and quality of applications received. **Individual Awards are not expected to exceed $1,000,000 per project.**

Type of Grant Program: **Competitive**

Application Deadline: **Tuesday, April 19, 2022, 5:00 P.M. EDT**

Eligible Applicants: The RMCD Pilot Program is open to Maryland public and private entities with facilities located within the State of Maryland that will be served by the proposed project. 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
- Utilities, Cooperatives and Municipal Utilities implementing microgrids to improve community resilience for specific, localized energy resilience needs and shortfalls. Funds **cannot** be used to supplement wider-scale distribution system planning/investment efforts and projects, or for research and development projects that provide a competitive advantage.)

Eligible Projects: To be eligible for award, a proposed project must be ready for final engineering, design, and installation (i.e. "shovel-ready"). An Applicant must have completed a substantial amount of preconstruction activities to assure the proposed project's feasibility and constructability. To evidence that this due diligence has been completed for the proposed project, the application must include the Attachments specified below in "Required Application Documents." Please note that if a proposed project is not eligible for the RMCD Pilot Program because of insufficient preconstruction activities, it may be a good candidate for the Resilient Maryland program.

To be considered, a proposed project must be focused on at least one of the following three (3) key areas of outcome.

Outcome 1: Resilience for Essential Organizations and Infrastructure	The proposed microgrid enhances the resilience of a community by providing reliable, clean, and affordable power to businesses, organizations, community services, and/or infrastructure essential to the preservation of public wellbeing and a functional society. The proposed microgrid must be able to operate independently of the utility grid to sustain the connected essential loads through both short-term and long-term outages.
Outcome 2: Socioeconomic Equity Enhancement	The proposed microgrid improves the socioeconomic equity of a community or population experiencing vulnerabilities that have been historically underserved/unserved. Examples of vulnerabilities that the microgrid may mitigate include but are not limited to: high energy burden (the percentage of monthly income that must be spent on energy costs); high frequency of power outages; poor local air quality; high rent as a result of expensive energy; and inaccessibility to clean energy technologies due to systemic societal, building structural, and/or financial barriers.
Outcome 3: Clean Energy Economic Development and Education	The proposed microgrid will include one or more of the following: (1) It allows for the continued operation for a facility that provides substantial employment in the surrounding community(ies). (2) It serves a public or private university or college and will create workforce development programs, certifications, degrees, and educational opportunities designed to train students and displaced workers for careers in the clean energy industry. These educational programs should be designed to be easily replicable and scalable by other higher learning institutions. The proposed project must directly involve students in the microgrid planning and installation phases.

Eligible Costs:

RMCD Pilot Program grant funds will be provided for reimbursement to help offset of costs of: DER equipment, wiring and communication infrastructure, and labor costs for the microgrid. Examples of items that are eligible for reimbursement include but are not limited to the following:

- Solar photovoltaic (PV) panels and associated racking, mounting, and wiring
- Energy storage systems (e.g. battery, thermal, mechanical, pneumatic, etc.)
- Combined Heat and Power (CHP)
- Microgrid controllers and associated software
- Switchgear
- Customer-side distribution infrastructure
- Communication wiring and other equipment necessary for microgrid operation
- Other equipment or technology needed to install a viable project.

- Commissioning and testing costs.

Award Amounts: MEA anticipates funding up to three (3) proposed projects. Final award amounts will be determined at the time of selection based on capital cost of the microgrid, leveraged funding sources obligated by the Applicant, efficiency of the capital stack, amount and quality of feasibility analysis, conceptualization, and general due diligence completed, and best value to the State of Maryland.

Evaluation Criteria: Each project **must meet the Project Requirements and the Minimum Eligibility Criteria listed at the end of this FOA** to be considered for award. Upon meeting these criteria, each eligible project will be evaluated using the Evaluation Criteria described in the table below and based upon its ability to achieve **at least one** of the specified outcomes.

Criterion	Description
Value Proposition	The application provides a detailed description of the facilities to be served by the microgrid and makes a strong and detailed case for the quantifiable and qualitative benefits and values delivered by the project to the community, campus or facilities it serves, and, as applicable, to the general public. **Priority will be given to a proposal that provides for direct involvement in the project's development by the community to be served and the local electric utility.**
Due Diligence and Practicality	The proposal provides sufficient evidence that substantial preconstruction activities have been completed as part of the applicant's due diligence. Such preconstruction activities include but are not limited to: the completion of feasibility analysis: preliminary engineering and design: pro forma financial modeling: an estimation of greenhouse gases that will be avoided as a result of project implementation; and an assurance that any legal, logistical, or strategic barriers complicating installation have been, or will be, easily overcome prior to or during the course of installation. The proposed microgrid should require only minimal remaining due diligence and be realistically implementable in the immediate future.
Ability to Meet the Identified Outcome Area	The proposal clearly defines and quantifies the benefits that the proposed microgrid will provide to the Maryland organization or community it serves. The technical and economic data, including but not limited to modeling and calculation assumptions, methodologies, results, projections, etc. must be reasonable, accurate, and defensible and should not require substantial refinement or modification. Barriers to project installation, such as logistical, geographical, structural, regulatory and/or legal must be mitigated prior to or during project construction. The project proposal must evidence that such barriers have already been mitigated and/or any remaining barriers will be mitigated

	prior to or throughout project construction. Priority will be given to projects that demonstrate the following Outcome-specific achievements: For Outcome 1, Resilience for Essential Organizations and Infrastructure, a priority will be given to a project that includes highly critical public infrastructure necessary for the preservation of life and safety (e.g. hospital, wastewater treatment plant, etc.) with a clear, concise, justification for its facilities and infrastructure selection methodology. A priority will also be given to a project that includes substantial cybersecurity measures and equipment. For Outcome 2, Socioeconomic Equity Enhancement, a priority will be given to a project that mitigates against additional threats to power integrity that adversely and disproportionately impact the community(ies) served, (e.g., climate change, environmental degradation, operational threats to critical systems such as HVAC and potable and wastewater plumbing, etc.) For Outcome 3, Clean Energy Economic Development and Education, A priority will be given to a project that allows for an employer located in a socioeconomically disadvantaged community with a larger than average proportion of displaced workers. A priority will also be given to a proposed project that prioritizes students from communities that have been historically socioeconomically underserved or unserved.
Number of Outcomes Achieved	A priority will be given to a project that is designed to achieve more than one Outcome as defined by this FOA and that provides sufficient evidence showing that it will achieve each of the Outcomes identified.
Defined and Quantified Benefits	The proposal provides defined and quantified benefits to the organizations and communities to be served by the proposed microgrid due to its construction. These benefits include but are not limited to: full, month-by-month annual generated energy (electrical and thermal, if applicable); avoided grid electricity consumption and associated avoided grid electricity cost; avoided thermal energy generated from traditional sources (e.g. boilers) and associated avoided thermal energy costs (as applicable); projected revenues from demand response programs, grid services, and other sources resulting from the operation of the microgrid, as applicable; all applicable rated electrical and thermal capacities of generating equipment in terms of kilowatts (kW) and million British thermal units (MMBtus), respectively; a **dollar valuation of resilience to the organizations and facilities the microgrid will serve;** projected **percent reduction of energy burden;** and/or **projected number of**

	clean energy careers broken out by type (e.g. installers, engineers, consultants, etc.) created by the microgrid.
Partnerships	The proposed project includes appropriate partnerships to help assure that a priority is placed on delivering "best value" to the project's stakeholders. 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 distribution grid, and DER system offtakers, as applicable. **Applicants must 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: Application packages will be evaluated competitively. The Evaluation will consist of two (2) steps. First, the RMCD Pilot Program Manager will review each application package to determine its eligibility based on the inclusion of required application documents and meeting the Minimum Eligibility Criteria discussed in the sections of this FOA that follow. An application package that is deemed eligible by the RMCD Pilot Program Manager will then undergo the competitive evaluation that consists of three (3) substeps. First, the results of this review will be attached to the application package. The application package will be provided to a Review Team that consists of MEA staff with relevant experience, and may include external State agency partners with relevant experience. The Review Team will evaluate each proposal according to the Evaluation Criteria and develop a shortlist of finalists. Next, these finalists' application packages and Review Team rankings and comments will undergo a technical and economic review by MEA's third-party Technical Assistance Contractor to assess the integrity and quality of the project. The results of these analyses will then be reviewed by the Review Team. Only projects that have been given the highest confidence in data integrity by the technical and economic evaluation will be recommended for award.

Required Application Documents: To be considered **complete**, an application for a RMCD Pilot Program grant award must include the following documents**.** Failure to submit any of the required documents will result in rejection of the entire proposal.

- **Cover Letter:** Must be on Applicant letterhead signed by an authorized representative with signatory authority, who will sign the Grant Agreement with MEA, if the Applicant organization is selected for an award. The cover letter must include:
    - Full name of the Applicant organization exactly as it appears on its IRS Form W9;
    - Names and street address(es) of microgrid component location(s);
    - Names and street address(es) of the facilities and/or infrastructure the microgrid will serve;
    - Brief summary of the purpose of the microgrid and which Outcome(s) as defined by the Evaluation Criteria section it seeks to achieve;
    - Name of and contact information of the Project Contact; and
    - Name(s) of legal counsel with contact information.

- **Project Proposal:** Must include the following information:
    - Executive Summary;
    - Full value proposition for the microgrid, which includes a description of the facilities, infrastructure, and community it will serve;
    - Summary of the microgrid configuration that is further detailed in its feasibility study (see below);
    - Summary of lifecycle financial attributes of the microgrid, including total project capital cost, project net present value (NPV), simple payback period, capital cost per kW of capacity, operational and maintenance costs per kilowatt-hour (kWh) of production, and weighted average cost of capital (WACC);
    - Summary of projected greenhouse gas emissions reductions;
    - Detailed explanation of how the proposed project meets the Evaluation Criteria of this FOA;
    - Detailed budget for the microgrid project that includes a breakout of leveraged funding sources and cost-match by the Applicant organization;
    - Anticipated project completion timeline (projects **must commence installation prior to July 1, 2023**); and
    - Names, titles, and organizational affiliations of individuals anticipated to be on the project team.

The following attachments are **required.** They are the same deliverables that Resilient Maryland awardees produce with their grant funds. All Applicants, regardless of Resilient Maryland participation, should read the descriptions below and ensure all requirements are met before submission of an application to the RMCD Program. Applicants who have participated in the Resilient Maryland program should submit their Final Deliverables, **modified as necessary** with new information. Applicants that have not participated in the Resilient Maryland program must produce the attachments with all information specified by the descriptions below.

- **Feasibility Study:** A full feasibility study for the proposed project/microgrid that includes the following information:
    - Detailed description of the facilities and their associated loads to be served by the microgrid;
    - At least twelve (12) continuous months of quantified energy consumption data for the facilities to be served by the microgrid (electrical and thermal, such as natural gas, fuel oil, etc, as applicable) as well as the associated costs incurred by facility owners;
    - A description of all energy efficiency upgrades made within five (5) years prior to the submission date of the proposal and a description of all energy efficiency upgrades that will be implemented as part of the microgrid project;
    - A detailed description of the microgrid configuration including but not limited to the selected distributed energy resources (DERs), associated control and management systems, and utility grid interconnection equipment;
    - Projected annual, month-by-month: energy production and fuel consumption (as applicable), thermal savings (which shall be shown as negative if there is a net increase in thermal fuel consumption);
    - Total installed cost for full microgrid implementation with budgetary breakdown by, at minimum: final engineering and design costs, equipment costs, labor costs (assuming reasonable fully-loaded labor rates), permitting and inspection fees, utility

interconnection costs, site preparation costs, commissioning costs, and all other administrative and miscellaneous costs required for microgrid installation.
    - A description of secured and/or potential sources of capital (such as cost-match, loans, bonds, equity, utility incentives, tax credits, grants, etc.);
    - A brief summary of the regulatory, legal, and other strategic barriers that have been mitigated in order to install the microgrid, and a summary of any remaining barriers to be surmounted;
    - A timeline for complete microgrid installation and commencement of commercial operation.

- **Preliminary Engineering and Designs:** Site map(s) indicating physical locations of microgrid componentry, equipment specifications, cutsheets (as available), system diagram(s), and all other technical data for the microgrid presently available. 100% design is not required but should be to a point of completion that indicates final selected DERs and their locations, how they will be connected, and the control system that will manage microgrid operation.

- **Pro Forma Financial Model:** A microgrid lifecycle pro forma for at least twenty (20) years. The pro forma must specify sources of capital and projected costs and revenues associated with microgrid installation and operation. Model assumptions must be clearly documented and justified with accredited sources of data where applicable. The model must provide metrics that gauge financial viability which may include but are not limited to: net present value (NPV) analysis, internal rate of return (IRR) analysis, and simple payback analysis. The model must specify the weighted average cost of capital (WACC) as well as all annual percentage rates (APRs) on debt capital, as applicable.

- **Statement of Sources and Uses of Funding:** A statement that clearly identifies and explains the sources of funding needed to complete the balance of project costs and their uses in the project capital structure. This includes but is not limited to: construction loans, C-PACE funding, philanthropic funding, equity, other grants or incentives, utility incentives, etc. An ideal project will have specific funding sources identified and contractual commitments from the financiers such as letters of credit, commitment letters, etc.

- **Greenhouse Gas Reduction Report:** A report that quantitatively projects the amount of greenhouse gas (GHG) emissions that will be avoided from microgrid operation. The report should cover the microgrid lifecycle, minimum twenty (20) years. The report must include at minimum avoided tons of carbon dioxide (CO2), nitrous oxide (NOx), sulfur oxide (SOx), and volatile organic compounds (VOCs).

- **Implementation Barriers Report:** A report that discusses statutory, regulatory, legal and/or other strategic barriers which must be mitigated for successful installation of the microgrid. These barriers **must be mitigated already, or surmountable** within two (2) to three (3) years from execution of a Grant Agreement with MEA, if awarded. Projects that would require substantial statutory and/or regulatory modification to advance **will not be considered for RMCD awards.** The report must explain each barrier that has been mitigated to date and all barriers which have been mitigated and how mitigation was accomplished.

- **IRS Form W9:** A complete, current, accurate, and signed **IRS Form W9 for the Applicant organization**.

- **Verification of Good Standing:** All Applicant organizations with the exception of governmental bodies and nonprofit organizations must submit proof of Good Standing with the Maryland State Department of Assessments and Taxation (SDAT). Entities can run a search for their status using Maryland's Business Entity Search engine[1] or they can submit a Certificate of Good Standing from SDAT. Instructions on how to obtain a Certificate of Good Standing are available on the Maryland SDAT website[2].

Grant Program General Provisions: Grants awarded under MEA grant programs are subject to certain 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 RMCD Program budget, based on the quality and eligibility of applications submitted to MEA.

Minimum Eligibility Criteria: Each RMCD project **must meet the following eligibility criteria** to be considered for a grant award:

- **Site Location(s):** The microgrid must be located within and serve facilities located within the State of Maryland.
- **DER Restrictions:** Microgrids that include DER systems that are fueled by hydrocarbon fuel sources other than natural gas or propane for CHP systems implemented for energy resilience purposes; or diesel fuel for emergency standby generators, **will not be considered** for funding under the RMCD Pilot Program.
- **Historical Properties:** The microgrid must not have an adverse effect on the historical significance of the property, as determined by the Maryland Historic Trust (MHT). The MEA Historical Preservation Specialist will review each application, and a more detailed review may be required by MHT. If an adverse effect is identified, the microgrid must be modified so that the effect is mitigated or it cannot be awarded funds from the RMCD Program.
- **Prior Expenses Restriction:** RMCD funds cannot be used to offset costs that were incurred prior to the filing of an application with the RMCD Program.
- **Applicant Contribution/Leveraged Funds:** The Applicant must contribute and/or leverage at least **fifty percent (50%)** of the total cost of the project. This may be done in the form of cost-match, contributed labor, loans, bonds, third-party funds, equity investments, etc.
- **Good Standing Requirement:** Non-governmental project developers, site owners, and system owners must be in Good Standing with the Maryland State Department of Assessments and Taxation (SDAT).

Submission Instructions: Once complete, the Application package should be submitted to MEA Energy Resilience Program Manager Brandon Bowser via email to BrandonW.Bowser@Maryland.gov. **All documents must be submitted no later than 5:00 P.M. EDT, April 19, 2022.** MEA **will not accept**

[1] https://egov.maryland.gov/BusinessExpress/EntitySearch

[2] https://dat.maryland.gov/businesses/Pages/Internet-Certificate-of-Status.aspx

[3] https://energy.maryland.gov/Pages/all-incentives.aspx

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 Brandon Bowser via email at BrandonW.Bowser@Maryland.gov or by calling at (443) 306-0304 **no fewer than fourteen (14) days** prior to the April 19 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.