



Funding Opportunity Announcement

FY2023 Combined Heat and Power Grant (CHP)

*****20 SEPTEMBER 2022 UPDATE: APPLICATION DEADLINE EXTENDED – SEE BELOW*****

Program Description: The Maryland Energy Administration (MEA) is pleased to announce the Fiscal Year 2023 (FY23) Combined Heat and Power (CHP) Grant Program (the Program). This Program provides incentives to Maryland organizations, State agencies and departments, local governments, and essential infrastructure seeking capital support for the installation of qualified CHP systems at their facilities. CHP systems provide enhanced energy resilience, power redundancy, operational sustainability, and energy affordability to entities in both normal and grid outage situations. This is a **first-come, first-served grant program** open to all entities described in the Eligible Applicants section below. Awards are made in the order in which eligible Application Packages are received.

FY23 CHP Grants are provided under two (2) Areas of Interest (AOIs):

- **AOI 1: Resilient and Sustainable CHP Systems:** Funds are provided under this AOI for systems that are installed to enhance operational resilience of the facility **and/or** utilize renewable fuel sources. Eligible systems must include black start and islanding capability **and/or** be fueled on-site by renewable natural gas (RNG or “biogas”), green hydrogen, woody biomass, biodiesel, or other sustainable biofuels approved by MEA on a case-by-case basis.
- **AOI 2: Efficient CHP Systems:** Funds are provided under this AOI for systems that are installed to enhance the efficiency of the facility’s operations and reduce energy expenses. CHP systems under AOI 2 are not required to include black start and islanding capabilities nor use renewable fuels.

Type of Grant Program: **Non-competitive (first-come, first served)**

Application Deadline: **5:00 P.M. EST, Thursday, December 15, 2022**

Eligible Applicants: Eligible FY23 CHP Grant Program Applicants must be legally established nonresidential entities that have the authority to transact

business and/or operate within the State of Maryland. Generally, this means the following:

- Critical and essential infrastructure
- Industrial and manufacturing plants
- Greenhouses and other agricultural operations
- Chemical and pharmaceutical plants
- Multifamily housing complexes
- State and local government facilities
- Hotels and conference centers
- Institutional organizations (e.g. colleges, universities, correctional facilities)
- Public and private educational facilities (e.g. schools)
- Others seeking relatively continuous access to power and thermal energy

Eligible Activities: The FY23 CHP Grant Program incentivizes the core CHP system components and the ancillary equipment needed to operate and successfully interconnect the system with the site and, when applicable, the electric distribution grid. A list of eligible CHP system types and ancillary equipment is provided below.

Eligible CHP Systems

- Reciprocating engines
- Turbines and microturbines
- Micro-CHP systems (less than 60 kW nameplate capacity)
- Waste heat to power
- Fuel cells
- Wood-fired CHP systems
- Others, considered by MEA on a case-by-case basis

CHP eCatalog: Applicants are highly encouraged to utilize the U.S. Department of Energy (DOE) [CHP eCatalog](https://chp.ecatalog.lbl.gov/)¹ when considering CHP systems for their operations. This comprehensive searchable database provides detailed information on commercially available packaged CHP systems which has been technically vetted by the U.S. DOE. The eCatalog also provides valuable information regarding funding sources, such as incentives available from utilities and low-cost financing available from C-PACE programs. Additionally, users can access valuable CHP resources such as project profiles, FAQs, installation databases, site screening tools

¹ <https://chp.ecatalog.lbl.gov/>

such as performance calculators and emissions reduction estimators, and networks of developers and solution providers.

Ancillary Equipment and Technologies

The following ancillary equipment and technologies are typically installed with core CHP systems to ensure their optimal installation and, when applicable, interconnection with the electric distribution grid and other customer-side distributed energy resources. They are eligible for reimbursement under FY23 MEA CHP Grants.

- Black start and islanding technologies
- Heat exchangers
- Absorption chillers
- Heat recovery steam generators (“HRSG”)
- Carbon sequestration and carbon capture technologies
- Associated connections, piping, and wiring
- Innovative technologies, considered by MEA on a case-by-case basis

Eligible Fuel Sources

- Natural gas
- Renewable natural gas (RNG or “biogas”)
- Hydrogen
- Woody biomass
- Propane
- Biodiesel/other biofuels, approved by MEA on a case-by-case basis

CHP systems fueled by coal, fuel oil, or diesel fuel are **not eligible** to receive awards under the FY23 CHP Grant Program.

Program Budget: A total of **\$2,500,000** is anticipated to be available. The amount awarded may be higher or lower depending on the quantity and quality of applications received.

Minimum Criteria: The following criteria must be met at minimum for consideration under the FY23 CHP Grant Program.

- **System Types:** Only systems described in the Eligible Technologies section of this FOA are eligible under this incentive program.
- **AOI 1:** Systems that Applicant organizations have applied under Area of Interest 1 for funds must include black start and islanding capabilities, which means they must be able to seamlessly or quickly restart after a power outage and power, at minimum, loads

designated as critical/essential by the facility throughout the duration of the outage; **and/or** must be fueled by renewable natural gas (RNG or “biogas”), green hydrogen, woody biomass, biodiesel, or other sustainable renewable fuel sources approved by MEA on a case-by-case basis.

- **Annual Fuel Use Efficiency:** A combusting CHP system must achieve annual fuel use efficiency of at least **60%** (higher heating value, or “HHV”). A non-combusting CHP system must achieve an annual fuel use efficiency of at least **50%** (HHV). Annual fuel use efficiency (“FUE”) is defined by this incentive program as follows, where all figures are in million British thermal units (MMBtu) and annualized:

$$FUE = \frac{(Electricity\ Produced + Thermal\ Energy\ Recovered\ for\ Use)}{Fuel\ Consumed}$$

- **Simple Payback Requirement:** **All systems** must achieve simple payback in no more than twenty-five (25) years. Simple payback for purposes of this program is calculated as total capital cost of the CHP system and its ancillary technologies, without accounting for any incentives, divided by annual net energy cost savings produced by the system.
- **Capacity of Multiple CHP Units:** For the purposes of incentive calculation, MEA will consider the **total** nameplate capacity of all CHP units serving the Applicant organization facility/facilities when calculating the incentive amount. Multiple CHP units are ineligible for individual awards. *For example: three (3) 500 kW units will be considered a 1,500 kW system to calculate the incentive.*

Review Process: FY23 CHP Applications will be accepted and considered for funding in the order in which they are received. Applications which meet the minimum eligibility requirements described in the Minimum Criteria section above and all rules, restrictions, and requirements described in the Funding Provisions, Requirements, and Restrictions section below will be awarded funding until the Program budget is exhausted, subject to funding availability.

The review process will consist of three (3) steps:

1. The MEA CHP Program Manager will perform an initial eligibility review.

2. The application will undergo a detailed review of technical specifications and economics.
3. The application will be reviewed by a team of MEA staff with relevant experience to ensure the findings of steps 1 and 2 are accurate.

Upon passing the review steps described above, MEA will award funds consistent with the award calculation formula described in this FOA until funds are exhausted or the program closes for applications, whichever occurs first.

Award Formula: With the exception of Micro-CHP systems (those with nameplate capacity less than or equal to 60 kilowatts “kW”), grants are calculated based upon installed nameplate capacity as described in the tables below.

Area of Interest 1: Resilient and Sustainable CHP Systems – Award Amounts	
CHP System Nameplate Capacity	Award Amount
Micro-CHP (< 60 kW)	50% of Net Total Project Cost* <u>OR</u> \$100,000; whichever is lower
61 kW – 500 kW	\$600 per kW
501 kW – 1,000 kW	\$550 per kW
> 1,000 kW	\$500 per kW, not to exceed \$650,000 total

**Net Total Project Cost is the Total Project Cost minus all other incentives and leveraged funding sources.*

Area of Interest 2: Efficient CHP Systems – Award Amounts	
CHP System Nameplate Capacity	Award Amount
Micro-CHP (< 60 kW)	40% of Net Total Project Cost* <u>OR</u> \$80,000; whichever is lower
61 kW – 500 kW	\$500 per kW
501 kW – 1,000 kW	\$450 per kW
> 1,000 kW	\$400 per kW, not to exceed \$400,000 total

**Net Total Project Cost is the Total Project Cost minus all other incentives and leveraged funding sources.*

Partial awards: Partial awards are possible under the Program. If Program funding is insufficient to award the full amount for which the final qualified Applicant is eligible under the award calculation formula, MEA will offer the maximum amount possible to the Applicant.

Required Application Documents: The documents listed and described below must be submitted to MEA to constitute a **complete and accurate Application Package** to the FY23 CHP Grant Program. An Application Package found to be missing required documents and/or

information, or which requires additional clarification will be marked as **Incomplete**. An Applicant whose Application Package has been marked as Incomplete will be given **thirty (30) days** to submit the missing information and/or clarification requested by MEA in order to retain their place in the Application queue. If this information is not received within the thirty (30) day timeframe, the Application Package will be **rejected** from consideration and the Applicant will lose their position in the queue and need to reapply.

Required Application Documents

- **MEA FY23 CHP Application Workbook:** A complete and accurate **FY23 MEA CHP Application Workbook** signed by the authorized signatory for the Applicant organization (and project contractor/developer, if applicable at the time of application) is required. Please note that the Applicant organization name and address provided in this workbook must match the name and address listed on the Applicant organization's IRS Form W9.
- **Feasibility Study:** An Applicant organization must provide a CHP system feasibility study which gives an overview of the project site, its energy profile, a detailed explanation of the proposed CHP system and projected operating metrics, energy savings, cost savings, and anticipated CHP system annual fuel use efficiency as defined by this FOA.
- **Utility Bills (existing facilities only):** An Applicant organization proposing the installation of a CHP system to benefit an existing facility/facilities must provide twelve (12) consecutive months of electric utility bills, and, if applicable, concurrent twelve (12) consecutive months of natural gas/other fuel bills which **exactly match** the utility data provided in the FY23 MEA CHP Application Workbook.
- **Energy Baseline Model (to-be-constructed facilities only):** An Applicant organization proposing a CHP system which will be installed in a facility/facilities that has (have) not yet been constructed must submit a model of the projected energy consumption of the facility/facilities. This should include electricity, and, if applicable, natural gas/other fuel sources. This model must assume that the CHP system is not installed and energy is obtained from the utility and fuel provider, as applicable.
- **IRS Form W9:** A complete, current, and legible IRS Form W9 for the Applicant organization must be provided.
- **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](https://egov.maryland.gov/BusinessExpress/EntitySearch)², 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](https://dat.maryland.gov/businesses/Pages/Internet-Certificate-of-Status.aspx)³.

Submission Instructions: MEA is encouraging the use of electronic applications to streamline processing and reduce environmental impacts. If you cannot apply electronically, please contact MEA no later than five (5) days prior to the application deadline to work on an alternative method to submit an application. Applications must be submitted no later than **5:00 P.M. EST**,

² <https://egov.maryland.gov/BusinessExpress/EntitySearch>

³ <https://dat.maryland.gov/businesses/Pages/Internet-Certificate-of-Status.aspx>

Thursday, December 15, 2022, unless the Applicant has contacted MEA regarding an alternative application method and that method has been authorized in writing by MEA.

Application Packages should be submitted electronically to MEA via email to:
CHP.MEA@Maryland.gov.

Grant Program General Provisions: MEA grant programs are covered by general provisions that apply to all energy programs. A copy of the General Provisions document is available on [MEA's website](#)⁴; this document will be incorporated into all FY23 grant agreements issued by MEA.

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 FY23 CHP Grant Program budget, based on the quality and eligibility of applications submitted to MEA.

Administrative and General Requirements

- **Facility Ownership:** Eligible Applicant organizations must either (a) own the facility or facilities where the CHP system will be installed, or (b) lease the facility under a leasing agreement which permits modification to the premises by the Applicant organization and/or have legal written permission to install the system from the property owner.
- **Permitting and Inspections:** An Applicant organization selected for funding under this incentive program must apply for and obtain all permits and certificates required of all local, State, and federal authorities having jurisdiction for its project, and must adhere to all applicable rules, restrictions, terms, conditions, and timelines imposed by these authorities. MEA must receive copies of all required permits and certificates prior to the disbursement of any Groundbreaking, Completion, or Performance Verification funds. MEA must receive copies of all required final inspections prior to the disbursement of any Completion or Performance Verification funds.
- **Funding Availability:** MEA reserves the right to obligate all or none of the MEA FY23 CHP Grant Program budget, based on the quality and eligibility of Application Packages submitted to MEA.
- **Award Execution Deadline:** An Applicant organization selected for an award under this Program must be able to enter into a Grant Agreement with MEA by no later than **5:00 P.M. EST, Tuesday, January 31, 2023**.
- **Payout Restriction:** MEA will **not disburse award funds** to any project which has ordered equipment and/or commences system construction prior to the effective date of the Grant Agreement with MEA.
- **CHP System Completion Deadline:** The CHP system must be fully-installed, commissioned, pass all inspections required to operate by all applicable authorities having jurisdiction, be interconnected with the electric distribution utility, and be fully-operational by no later than **December 31, 2025**.

⁴ <https://energy.maryland.gov/Pages/all-incentives.aspx>

Award Disbursement Requirements

- **Groundbreaking Disbursement (30% of the Award):** In order to receive the Groundbreaking Disbursement of the award, an Awardee must submit all information required by its Grant Agreement with MEA in order to sufficiently document that project materials have been delivered to the project site and construction of the project has begun (known as “Project Groundbreaking”). **Generally, this will include:**
 - Groundbreaking Disbursement Request form (provided by MEA);
 - Purchase orders and/or invoices for the CHP system and ancillary equipment;
 - System design drawings;
 - Schedule and copies of all permits and certificates required by all local, State, and federal authorities having jurisdiction;
 - System manufacturer cutsheets/datasheets;
 - System service/warranty agreement with a service term of at least five (5) years;
 - System commissioning plan;
 - Copy of Awardee application for interconnection with the electric utility (only applies to systems seeking interconnection with the utility grid);
 - Photos of the project site depicting the CHP system and ancillary equipment onsite and commencement of system construction; and
 - Any other documentation required by MEA.
- **Completion Disbursement (60% of the Award):** In order to receive the Completion Disbursement of the award, an Awardee must submit all information required by its Grant Agreement with MEA in order to sufficiently document that project installation and commissioning have been completed, that the CHP system has passed all inspections required of all authorities having jurisdiction, and, if grid-connected, has received approval to operate from the local electric utility (known as “Project Completion”). **Generally, this will include:**
 - Commissioning Disbursement Request form (provided by MEA);
 - Invoices for all final equipment and installation costs from all developers, contractors, and vendors;
 - Final CHP system drawings;
 - Copies of all final inspections required by all local, State, and federal authorities having jurisdiction;
 - Final commissioning report indicating that the system has met or exceeded minimum expectations and which has been signed by the commissioning organization;
 - Awardee acceptance documentation;
 - Copy of approved interconnection application with the electric utility (only applies to systems that are interconnected with the utility grid);
 - Documentation of utility approval to operate the CHP system;

- Photos of the installed CHP system indicating that installation and commissioning are complete (photos should be devoid of loose wires, connections, and piping as well as tools and construction equipment);
- Two (2) weeks of continuous operational data that includes fuel consumed, electricity produced, and thermal energy captured for use at the facility/facilities demonstrating that the system is meeting Annual Fuel Use Efficiency Requirements; and
- Any other documentation required by MEA.
- **Performance Verification Disbursement (10% of the Award):** In order to receive the Performance Verification Disbursement of the award, an Awardee must submit all information required by its Grant Agreement with MEA in order to sufficiently document that the CHP system is operating at its projected Annual Fuel Use Efficiency for one (1) year, within a reasonable margin of error (known as “Project Performance Verification”).
Generally, this will include:
 - At the conclusion of each quarter of the performance period, quarterly spreadsheet workbooks providing fuel consumed, electricity produced, and thermal energy captured for use at the facility/facilities (workbook template provided by MEA);
 - Performance Verification Disbursement form at the conclusion of the performance period (provided by MEA); and
 - Any other documentation required by MEA.

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