Data Center Energy Efficiency Grant Program
Frequently Asked Questions

This document responds to frequently asked questions about the Maryland Energy Administration (MEA) fiscal year 2019 (FY19) Data Center Energy Efficiency Grant Program (DCEEG). MEA is providing this document to clarify and expand on the ***Notice of Availability.***

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General Questions

1. **What is considered a data center?**

   For the purpose of this program, a data center is any physical space, either stand-alone or within a mixed-use facility, used to house information technology equipment. Specifically, this includes networked computer servers, networking systems, components, and supporting equipment.

To be eligible for the grant, a data floor facility size must be at least 2,000 square feet within a single facility. Multiple smaller spaces within a single facility (e.g., multiple data rooms within a single standalone facility) that in aggregate are at least 2,000 square feet would be considered an eligible data center. However, a server closet would not be considered a data center.

2. **Who can be an applicant under this Program?**

   Only data centers can apply for this Program. Contractors working in or on a data center are not eligible to serve as the Program applicant. However, a contractor may assist with completing the paperwork and preparing the submission.

3. **What is the program timeline?**

   The program timeline can be found on the DCEEG Program Web Page at http://energy.maryland.gov/business/Pages/incentives/DCEEG.aspx

4. How does the MEA define Power Usage Effectiveness (PUE)?

For the purpose of this program, MEA will define Power Usage Effectiveness (PUE) as the ratio of total facility power to IT equipment power.

$$\text{PUE} = \frac{Total\ Facility\ Power}{IT\ Equipment\ Power}$$

MEA considers the total facility power to be the energy that is dedicated solely to the data center (e.g., the energy measured at the utility meter of a dedicated data center facility or at the meter for a data center in a mixed-use facility). MEA considers IT equipment power to be the energy consumed by equipment that is used to manage, process, store, or route data within the computer space. A detailed explanation of PUE can be found at: https://datacenters.lbl.gov/sites/default/files/WP49-PUE%20A%20Comprehensive%20Examination%20of%20the%20Metric_v6.pdf

5. Who should be the applicant listed in Section A on the MEA FY19 DCEEG Program application?

If an applicant is a business, then the business owner or authorized representative of the business owner. For all other applicants, the applicant should be an individual with signatory authority for the organization.

6. Will MEA provide technical guidance or recommendations?

Technical assistance to help determine savings or efficiency options is not available from MEA under this grant program. However, general application assistance is available by contacting **rory.spangler@maryland.gov**. MEA's goal is to respond to all such requests within one business day.

You may also wish to contact your utility to see whether a utility trade ally could offer project development and application assistance.

7. Are there project size limitations associated with this program?

The proposed project must have a total cost of at least $40,000 in order to qualify. There is no limit on project size, although the maximum grant available through this Program is $200,000 per project, subject to funding availability.

8. How is the grant structured and how much money should I plan on spending out of pocket?

MEA grants are designed to reimburse up to 50% of the net customer cost after other incentives and grants have been applied.

For example:
Total project cost: $50,000
Utility incentives/other incentives: $10,000
Customer net cost: $50,000 - $10,000 = $40,000
MEA grant (assumes a 50% grant) = $40,000 x 50% = $20,000

Prior to grant payment, a representative from MEA will conduct a post-installation site visit to verify project completion and operation. The grantee may then submit an invoice requesting payment for the grant with the appropriate documentation including all paid invoices or a completed contract with $0 balance.

9. Can I apply for the MEA grant if I also will be applying for an incentive from my local utility?

Yes. Applicants are encouraged to participate in any local utility incentive programs to maximize leveraged funds.

10. What is the process in awarding grants?

Applications are accepted on a competitive rolling basis. MEA will rank applications using the review criteria as well as against other applications that have been received and make one of three determinations: approve the project, place the project on a waiting list, or reject the application due to funding limitations, application incompleteness, or other programmatic constraints.

MEA will communicate with each applicant regarding the project's selection status. If your application is selected for a grant, MEA will send a conditional approval letter with the specific grant amount that has been reserved for the project and the Terms and Conditions that may be specific to each grantee.
All grant awards are expressly contingent upon execution of a Grant Agreement between MEA and the selected applicant and completion of the project in accordance with all program requirements.

11. Is a new data center (New construction) eligible for a grant?

Yes. A new construction project is eligible for a grant award. The award amount will be calculated based on the incremental cost difference between a baseline measure and the proposed high efficiency measure. Measures must be cost-effective. For new construction, grants may cover up to 50% of the incremental cost. Baseline measures are defined as those measures which are described as meeting the minimum requirements in the local jurisdiction building code or the ASHRAE 90.4 data center standard.

Program Requirements

12. What are the energy savings requirements for eligible projects?

Projects must be cost effective and reduce existing energy usage by at least 10 percent (10%) from the overall data center facility baseline. To be considered cost effective a project's lifetime net energy benefits shall be at least equal to or greater than the cost of the project. Applications should include an energy analysis or energy savings calculations as well as utility bills or sub-meter data to establish the facility's energy consumption baseline.

MEA will consider the amount of energy savings during application evaluation when ranking eligible applicants.

13. What types of energy efficiency/energy conservation measures are eligible?

Any established, best-practice energy efficiency measure, as determined solely by MEA, will be considered. A list of some potential energy efficiency measures is included in the Grant Program Notice of Availability.

Replacement of failed equipment or equipment deemed by MEA to be nearing the end of average useful life will not be considered an energy efficiency measure.

Specifications for individual electricity efficiency measures must meet all applicable energy code requirements. The proposed equipment must not only meet Maryland's energy code requirements but also

the minimum efficiency requirements and standards set by the local electric utility's rebate program, if applicable. Fluorescent lighting must be listed on the Consortium for Energy Efficiency (CEE) product list or must meet CEE standards. LED replacements must be listed on the Design Lights Consortium or ENERGY STAR® Qualified Products list. HVAC equipment must meet or exceed the minimum SEER/EER/IEER outlined by your local utility's rebate program and/or comply with the current International Energy Conservation Code.

MEA recognizes that improved system operations can be helpful in achieving energy saving targets. While applications that include operational components as well as traditional technology upgrades are welcome, applicants should be aware that energy savings from operational changes may be more difficult to quantify than savings from technology upgrades. The burden of proof for the percentage of energy savings achieved by operational changes rests with the applicant. ***MEA strongly encourages applicants to provide credible, third-party analysis or documentation to validate estimates of energy savings attributed to operational changes.***

14. Is an energy audit or Data Center Profile (DC PRO) Report required?

Yes. Applications that fail to submit an energy analysis or energy savings calculations; utility bills or sub-meter data; and a PUE report or estimate, will be rejected. MEA requires either a Data Center Energy Audit or a similar document demonstrating verifiable cost and energy savings.

15. Is PUE required?

Yes, a Power Usage Effectiveness (PUE) Report or PUE Estimate must be submitted. Estimates may be completed using the PUE Estimator on the CoE website found here: https://datacenters.lbl.gov/dcpro.

16. Where can I apply for utility incentives?

Applicants that are located within a utility service territory with an EmPOWER Incentive program should also apply for funding from EmPOWER energy savings programs offered through Maryland utilities. If the building you wish to upgrade is not eligible for utility incentives because it is located outside the service territory of any of the six EmPOWER Maryland utilities, or the owner/developer does not participate in a utility program, the project is still eligible for a grant under the MEA Data Center Energy Efficiency Grant Pilot Program. **Participation in the local electric utility's rebate program is strongly encourage, MEA will consider the use of leveraged funding during the review process.**

17. What is required to "showcase" a project?

MEA develops project case studies to demonstrate how energy efficiency can save money and reduce energy usage. To develop these case studies, MEA may share information that includes such project details as:

- Business name and location
- Business and building type
- Project development process
- Energy conservation measures
- Project costs
- Leveraged funds
- Energy and financial savings
- Simple payback

Subject to the requirements of the Maryland Public Information Act and any other applicable law, MEA and its representatives will not divulge confidential information or trade secrets. Grantees may review and approve photos and video taken of their facility.

18. Who qualifies as authorized signatory for the application?

The authorized signatory is the business or facility owner or representative authorized by the business or facility owner. The application must include owner information that matches its IRS W9 form.

19. How will I know if program Terms and Conditions are changed?

MEA will post any changes on its website.

20. Are applications related to new construction eligible?

Yes, new construction is eligible for this program.

21. Are renewable energy projects eligible?

No, renewable energy projects that generate energy are not eligible. Only measures that reduce energy use through energy efficiency are eligible.

22. Can a contractor complete an application on behalf of a Maryland customer?

The application must be signed and submitted by the owner or legal representative of the owner. However, a contractor may assist with completing the paperwork and preparing the submission.

23. What is the complete list of all required attachments to the application?

- A copy of the initial utility program application (if applying to local utility program)
- Contractor bid(s)
- Applicant's W9
- Data Center Energy Audit, DC PRO Report, or similar document demonstrating verifiable cost and energy savings
- Power Usage Effectiveness Report or PUE Estimate
- For new construction, a document detailing the cost-estimates of baseline equipment (ASHRAE 90.4 or local jurisdiction building code requirement) and incremental cost difference of proposed system
- Specification sheets for all proposed equipment
- Project timeline
- Most recent (12) consecutive months of electric bills and / or sub-meter data.

24. Can I mail a hard copy application?

Yes. However, applicants are encouraged to submit a complete application electronically. Contact the program manager for details on how to submit a paper application via mail.

Eligibility

25. What type of project is eligible for this program?

Please see the answer to question #1. Please note that MEA will only disburse grant funds to the data center grantee.

Evaluation Criteria

26. How will my application be evaluated?

MEA will assess qualifying applications for award based on the following competitive evaluation criteria:

- Cost effectiveness in combination with energy savings. *Projects shall have a simple payback period less than the average useful life of installed measures. MEA may evaluate cost effectiveness per measure and in aggregate.*
- Energy savings: *Applicant's must demonstrate the project will reduce the facility's aggregate annual energy consumption for the whole building or treated data center space within a building by at least 10%.*
- Demonstration of energy efficiency best practices or innovative technology.
- Project feasibility. *Successful applicants will demonstrate that the project can be completed by July 30, 2020.*
- Completeness, accuracy, and reasonableness of energy savings and cost estimates. *All cost estimates and electricity savings projections are subject to review and approval by MEA.*
- Completeness of application including the submission of all required attachments and supplemental documentation
- Use of leveraged funding. *MEA strongly encourages applicant's to participate in their local utility's EmPowerMD rebate program.*
- Diversity of energy efficiency measures. *Projects must consist of two or more measures. Measures may include, but are not limited to, the following:*
    - *Server Virtualization*
    - *Air Flow Optimization*
    - *Server decommissioning and consolidation*
    - *Aisle Containment*
    - *Heating, ventilation, and air conditioning (HVAC) upgrades*
    - *Motors and variable frequency drives (VFDs)*
    - *Uninterruptible power supply (UPS) upgrades*
    - *Building Management Software and Energy Analytics*
    - *Lighting*
    - *Sensors*
    - *Building Insulation and envelope improvements*

Applications that include a full energy audit report will be looked upon more favorably during the award process. Additionally, projects that demonstrate strong showcasing potential or projects that implement an innovative element may be given preference during the award process. MEA also reserves the right to select applications that allow for a broad diversity in the project portfolio including, but not limited to, geographical diversity.

27. Must I leverage utility or other incentive programs?

No. However, applications which leverage utility funding or other incentives may be ranked more favorably by MEA.

28. How does MEA evaluate project feasibility?

The applicant must submit one or more bids from a qualified contractor with the application, as well as a timeline showing the project can be completed by July 2020.

29. What if I don't have one year's worth of utility bills?

If you do not have these records, your utility history can be obtained from your utility provider. Your utility provider may require you to complete a form in order to obtain that information. *Note: One year's worth of utility bills is not required for new construction.*

If an applicant does not have meter data because the data center is part of a larger facility or the project boundary is limited in scope, MEA will accept sub-meter data. This sub-meter data should represent average energy use and should cover at least 30 days of operation.

30. How do I quantify cost effectiveness and energy savings?

Cost effectiveness means that the project's lifetime net energy benefits are at least equal to the cost of the project. This should be demonstrated as simple payback.

MEA will show preference to projects that include a full energy audit report. However, an applicant may still be successful if the application includes the minimum information outlined below.

- **A description of the existing system or equipment that will be modified**. This should include a description of the facility and its function, square feet of the facility, type and model of equipment to be replaced, location of affected equipment, and typical facility operating hours.
- **A description of the proposed project.** Attach bid(s) from a contractor for installed cost of measures and manufacturer data sheets. Depending on the measure, this includes:
    - The efficiency rating of the measures you wish to install
    - The efficiency rating of the measures you are proposing
    - Operational hours – both before and after the proposed upgrade
    - Number and type of units that are being replaced, and the number and type of upgraded units
- **Detailed project cost and energy savings calculations.** Clearly itemize all costs and assure that project costs include both material and labor. Appropriate documentation will include all calculations and assumptions, provide sources of projected savings, and enable MEA to properly evaluate the estimates. MEA reserves the right to request additional bids if the installation costs appear disproportionately high or low.

31. How do you calculate simple payback?

"Simple payback" is a calculation of the time it will take to recover the cost of the investment without incentives. It is determined by dividing total project cost by the annual energy savings in dollars. For example: a $50,000 project saving 400,000 kWh per year at $0.10 per kWh has a simple payback of 1.25 years ($50,000/$40,000 = 1.25 years).

32. What if I do not know the PUE of the proposed data center?

Complete the DC PRO Report or the PUE Estimator from the CoE found here: https://datacenters.lbl.gov/dcpro

33. Where can I find an example of an application?

MEA provides an application rubric of what may be considered good, better, and best. This rubric can be found on the program webpage.