ATTACHMENT F

USDA Forestry Service Grant/Cooperative Agreement with Maryland Department of Natural Resources to Manage State Wood Energy Team

Maryland Clean Energy Center (MCEC) successfully completed the deliverables and managed the outcomes per the agreement as sub-recipient to Maryland. Department of Natural Resources using staff specifically hired to support this work, with $212,000 in Fiscal Year 2022 - 2023 and an additional grant of $240,000 awarded to extend the work in Fiscal Year 2024.

Maryland Clean Energy Center (MCEC) met all reporting requirements for this grant, per the agreement in a timely manner.

U.S. Economic Development Administration (EDA) Maryland Energy Innovation Accelerator (MEIA) Grant

Maryland Clean Energy Center (MCEC) has successfully completed certain deliverables and managed the outcomes, per performance period to date, associated with this award Direct award of $750,000 in grant funds covering a three-year period from Fiscal Year 2022-2024, to support subsidiary entity Maryland Energy Innovation Accelerator (MEIA) with climate tech commercialization.

Maryland Clean Energy Center (MCEC) has met all reporting requirements for this grant, necessary to date per the agreement in a timely manner, and will submit a final report prior to the deadline when the grant period ends in September 2024.

DOE Mid-Atlantic PACE Alliance

Maryland Clean Energy Center (MCEC) participated as part of a cooperative three state alliance to successfully accomplish the required deliverables and outcomes per this grant agreement.

Maryland Clean Energy Center (MCEC) provided all accounting and reporting requirements for this grant to Virginia Department of Mines, Minerals & Energy as grant manager, per the agreement in a timely manner.

Maryland Clean Energy Center (MCEC) has entered into grant and loan agreements using millions of dollars in various sources of state funds, successfully accomplishing the expected deliverables and providing timely deliverable accountability and reporting.

USDA Forestry Service Grant/Cooperative Agreement with Maryland Department of Natural Resources to Manage State Wood Energy Team

In FY 2023, the USDA Wood Innovations Project addressed several goals created in FY 2022 and began new projects. The following synopsis details the progress made on each project.

Continuous work has been completed for Frostburg State University (FSU), which has shown interest in converting its 113 fossil fuel boilers to wood energy. An in-person visit by Wilson Engineering Services (WES) was conducted late in FY 2022, and since then, in FY 2023, WES has completed both a draft and final report showcasing three different scenarios for wood energy applications. This includes a pilot thermal system that serves only a handful of buildings, a thermal system for the whole campus, and a combined heat and power (CHP) system for the whole campus. While maintaining communications has been difficult in the fall of 2022, communication has been re-established and FSU stated they have serious interest in converting their whole campus to CHP. We will continue to assist FSU throughout the investment and transition process.

Additionally, Allegany County has continued interest in expanding the wood energy sector, this time for generating electricity. AES's Warrior Run power plant, located in Cumberland, is set to convert to wood energy. AES, the national company, is committed to being fossil fuel-free by 2025 and is looking to wood energy as its solution. The power plant had a PPA to generate 205MW with the state but had to break out of it and reduce its expected output to approximately 80MW to make this transition possible. The plant has begun test burns with 25% wood, and 75% coal. More updates will be provided as AES releases details.

Finally, in Allegany County, the biochar company Nexus is interested in locating their new Cumberland facility in the same industrial park as Warrior Run. This project will require 20-50 tons of wood (can be low quality with bark) which will greatly help incentivize needed forest management practices in the area. Nexus has already made significant progress in selecting a site, speaking with the relevant departments, finding buyers for the biochar, and developing a supply chain. MCEC has provided help by identifying potential locations, finding applicable tax incentives, and possibly helping with MD PACE funding.

Ensuring that thermal wood energy credits without any stipulation (such as requiring a mixture of primarily manure) qualify as a tier 1 renewable energy credit has been a top priority. In FY 2023, Eastern Shore Forests Products, which dries sawdust to create pellets using wood energy from rejected wood chips, had their combined heat and power wood energy system approved for TRECs despite the boiler running strictly on wood. While that was being approved, the wood energy coordinator participated on the Mitigation Working Group for the Maryland Commission on Climate Change assigned by the General Assembly to analyze the impacts of incentivizing wood energy in the state and develop recommendations based on the findings. The report, completed by a third party, determined that using wood energy would benefit MD's forest health, energy independence, and economy. The two recommendations that stemmed from this report were to continue supporting TRECs for wood-only thermal energy systems and for the Department of Commerce to provide incentives for facilities to transition from fossil fuels to wood.

In FY 2022, the Maryland Clean Energy Center applied for two Rural Maryland Council (RMC) Maryland Agricultural Education and Rural Development Assistance Fund (MAERDAF) projects. The first project, in which MCEC partnered with the Alliance for Green Heat and was awarded $25,000 with a 100% match, is to host two educational wood energy site visits in New England for attendees such as policymakers, environmental groups, and facility owners. One site visit occurred at the end of March and had a total of eight attendees visiting 11 different facilities. Following the event, attendees responded that it was extremely educational and that they were glad they attended. The next site visit will be to 11 different facilities across Vermont and New Hampshire which can host approximately 11 attendees.

The second MAERDAF project is to publish a Maryland Fuelwood Supply Chain Analysis. This project is in partnership with the Western Maryland Resource Conservation and Development Council and was awarded $30,000 with 100% match. This analysis will provide a current standing on fuelwood volume, forest management levels, and future forest health projections based on various wood energy usage levels. It also includes detailed information, such as tree size, age, species, and location. A Request for Proposals was published in fall 2022, and Renewable Resource Solutions, LLC (RRS) was selected as the contractor, bidding $3,000 under the maximum cost. RRS has been staying on schedule, presenting to the State Wood Energy Team (SWE Team) during quarterly meetings, and is on track to have the full publication completed by December 2023. From there, the wood energy coordinator and organizations that comprise the SWE Team will publish and publicize the analysis.

FY 2023 GOALS

MCEC and the Department of Natural Resources were awarded another USDA Wood Innovations Grant to cover a wood energy coordinator until FY 2025. The current coordinator will be unable to renew the existing contract which will end September 14, 2023, meaning that finding a replacement is the first priority to address in FY 2024.

The MAERDAF grants will require ongoing attention. While the educational site visit will occur in November and has the agenda already drafted and confirmed with facilities, attendees need to sign up, which will require constant outreach, printed materials will need to be developed, and transportation and hotel logistics will need to be planned out closer to the tour date.

The Maryland Fuelwood Supply Chain Analysis will require supervising RRS, such as providing them with needed resources and making sure they stay on schedule, as well as scheduling and hosting SWE Team meetings to provide RRS with real-time feedback. FSU will require assistance from MCEC, DNR, Wilson Engineering, and the U.S. Forest Service to:

1. Educate and increase support from FSU employees that impact the approval of the wood energy system
2. Design and install a wood energy system
3. Identify funding opportunities

4. Develop a reliable wood supply

Allegany College of Maryland (ACM) has shown interest in wood energy, both in terms of using it and creating courses focused on it. In FY 2024, more follow-up and involvement in ACM is needed.

Finally, there will need to be constant monitoring of proposed bills and how they can positively or negatively impact wood energy.

GRANT AGREEMENT
BETWEEN
MARYLAND DEPARTMENT OF NATURAL RESOURCES
AND
MARYLAND CLEAN ENERGY CENTER
FOR
FUNDING THE STATE WOOD ENERGY TEAM AND COORDINATOR

THIS GRANT AGREEMENT, effective on this day 12th of October, 2021, ("Agreement" or "Grant Agreement") is made by and between the Maryland Department of Natural Resources, (DEPARTMENT), and, Maryland Clean Energy Center, (GRANTEE), an instrumentality of the State of Maryland.

WHEREAS, Grantee is a corporate instrumentality of the State created by the General Assembly of Maryland with a mission to advance clean energy and energy efficiency products, services, and innovative technologies as an economic development mission; which includes:

- Promoting Economic Development & Jobs in the Clean Energy Industry Sector
- Promoting the Deployment of Clean Energy Technology
- Serving as an Incubator for the Development of Clean Energy Industry
- Providing Outreach & Technical Support to Further the Clean Energy Industry; and

WHEREAS, the USDA Forest Service Region 9 State and Private Forestry awarded Maryland DNR the Landscape-Scale Restoration grant, Developing Priority Projects with the Maryland Wood Energy Team, domestic grant 21-DG-11094200-099, naming Grantee as a funding partner bringing critical expertise to the application and grant partnership; and

WHEREAS, the GRANTEE, with its staff and contractors, are well qualified due to their experience with energy project development and financing, the ability to leverage its expertise and resources with those of the DEPARTMENT, and the capability to act as a bridge between public, private and academic partners in the marketplace to support this initiative and achieve the desired outcomes of the grant award; and

WHEREAS, DNR Forest Service's Forest Action Plan calls for stimulating installation of appropriately scaled, clean, and efficient wood energy projects in Maryland, addressing growing forest health concerns with affordable, equitable solutions, addressing the recent loss of a major market for small-diameter, low-value wood, reducing management costs to benefit public and private forests managed for forest health, and better utilization of forest residues to mitigate hazardous fuels; and

WHEREAS, the DNR Forest Service has determined that, because GRANTEE is uniquely positioned due to its role as a center for coordinating clean energy alternatives to advance woody biomass projects to best meet sustainable forest management, forest health, air quality, and other conservation needs, a grant award to the GRANTEE to administer the Program presents a conservation service opportunity within the meaning of Section 11-203(a)(1)(xviii) of the State Finance and Procurement Article of the Annotated Code of Maryland; and

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, the DEPARTMENT and the GRANTEE agree as follows:

1. PURPOSE OF AGREEMENT

The purpose of this Agreement is to provide the GRANTEE with funds which will enable the GRANTEE to execute the SCOPE OF WORK as more fully described in Appendix .

2. GRANT; GRANTEE'S CONTRIBUTION

2.1. In consideration of the various obligations to be undertaken by GRANTEE pursuant to this Agreement, the DEPARTMENT agrees to provide GRANTEE with funds in the amount of two hundred twelve thousand one hundred dollars ($ 212,100.00) (the "Grant"). GRANTEE agrees to use the Grant only for the activities set forth and described in Appendix A of this Agreement (the "Project").

2.2 Performance under this Grant Agreement shall commence on the Effective Date and, unless otherwise terminated in accordance with the terms of this Agreement, shall continue until the Grant has been utilized consistent with the requirements of this Agreement but no later than three (3) years from the Effective Date.

2.3 Effective Date - It is understood and agreed by the parties hereto that this Agreement and any modification thereof shall become effective or enforceable upon execution by both parties.

2.4 Termination for Convenience - The performance of work under this Grant Agreement may be terminated by the DEPARTMENT in accordance with this clause in whole, or from time to time in part, whenever the DEPARTMENT shall determine that such termination is in the best interest of the DEPARTMENT . The DEPARTMENT will pay all reasonable costs associated with this Agreement that the GRANTEE has incurred up to the date of termination and all reasonable costs associated with termination of the Agreement within the limits of grant funding.

2.5 Termination for Default - If the GRANTEE fails to fulfill its obligation under this Agreement properly and on time, or otherwise violates any provision of the Agreement, the DEPARTMENT may terminate the Agreement by written notice to the GRANTEE. The notice shall specify the acts or omissions relied upon as cause for termination. All finished or unfinished work provided by the GRANTEE shall, at the Department's option, become the Department's property. The Department shall pay the GRANTEE fair and equitable compensation for satisfactory performance prior to receipt of notice of termination, less the amount of damages caused by GRANTEE's breach. If the damages are more than the compensation payable to the GRANTEE, the GRANTEE will remain liable after termination and the Department can affirmatively collect damages.

2.6 Multi-Year Restriction - If the General Assembly fails to appropriate funds or if funds are not otherwise made available for continued performance for any fiscal period of this

Agreement succeeding the first fiscal period, this Agreement shall be canceled automatically as of the beginning of the fiscal year for which funds were not appropriated or otherwise made available. The GRANTEE may not recover anticipatory profits or costs incurred after termination.

2.7. The parties may agree in writing to an earlier termination date.

3. GENERAL PROVISIONS AND CONDITIONS

3.1. The terms of this Grant Agreement and its execution are subject to all applicable Maryland laws and regulations and approval of other agencies of the State of Maryland as required under State laws and regulations, including approval of the Board of Public Works where appropriate.

3.2. The DEPARTMENT shall not be liable in any action or tort, contract or otherwise for any action caused by the Grantee.

3.3. As a condition of the DEPARTMENT'S obligation to perform under this agreement, the GRANTEE hereby represents and warrants that:

(a) It is qualified to do business in the State of Maryland and that it will take such action as, from time to time, may be necessary to remain so qualified;

(b) It is not in arrears with respect to the payment of any monies due and owing the State of Maryland, or any department or unit thereof, including, but not limited to, the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of this Grant Agreement;

(c) It shall comply with all federal, State and local laws, regulations and ordinances applicable to its activities and obligations under this Grant Agreement; and

(d) It shall procure, at its expense, all licenses, permits, insurance, and governmental approval, if any, necessary to the performance of its obligations under this Grant Agreement.

3.4. The person executing this Grant Agreement on behalf of the GRANTEE certifies, to the best of that person's knowledge and belief, that:

(a) Neither the GRANTEE, nor any of its officers or directors, nor any employee of the GRANTEE involved in obtaining contracts with or grants from the State or any subdivision of the State, has engaged in collusion with respect to the GRANTEE'S application for the Grant or this Grant Agreement or has been convicted of bribery, or conspiracy to bribe under the laws of any State or of the United States;

(b) The GRANTEE has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee or agent working for the GRANTEE, to solicit or secure the Grant or this Grant Agreement, and the GRANTEE has not

paid or agreed to pay any such entity any fee or other consideration contingent on the making of the Grant or this Agreement;

(c) The GRANTEE, if incorporated, is registered or qualified in accordance with the Corporations and Associations Article of the Annotated Code of Maryland, is in good standing, has filed all required annual reports and filing fees with the Maryland Department of Assessments and Taxation and all required tax returns and reports with the Maryland Comptroller of the Treasury, the Maryland Department of Assessments and Taxation, and the Maryland Department of Labor, and has paid or arranged for the payment of all taxes due to the State;

(d) No money has been paid to or promised to be paid to any legislative agent, attorney, or lobbyist for any services rendered in securing the passage of legislation establishing or appropriating funds for the Grant; and

(e) Neither the GRANTEE, nor any of its officers, nor any person substantially involved in the contracting or fundraising activities of the GRANTEE, is currently suspended or debarred from contracting with the State or any other public entity or subject to debarment under Regulation 21.08 of the Code of Maryland Regulations.

3.5. Indemnification and Claims:

(a) The GRANTEE shall indemnify the State against liability for any suits, actions, or claims of any character arising from or relating to the performance of the GRANTEE or its subcontractors under this Grant Agreement.

(b) The State of Maryland has no obligation to provide legal counsel or defense to the GRANTEE or its subcontractors in the event that a suit, claim or action of any character is brought by any person not party to this Grant Agreement against the GRANTEE or its subcontractors as a result of or relating to the GRANTEE'S obligations under this Grant Agreement.

(c) The State has no obligation for the payment of any judgments or the settlement of any claims against the GRANTEE or its subcontractors as a result of or relating to the GRANTEE'S obligations under this Grant Agreement.

(d) The GRANTEE shall immediately notify the DEPARTMENT Project Officer of any claim or suit made or filed against the GRANTEE or subcontractors regarding any matter resulting from or relating to the GRANTEE'S obligations under the Grant Agreement, and will cooperate, assist, and consult with the State in the defense or investigation of any claim, suit, or action made or filed against the State as a result of or relating to the GRANTEE'S performance under this Grant Agreement.

3.6. The persons performing the services as set forth in the Appendix shall be employees of the GRANTEE. The GRANTEE is responsible for complying with all federal and State laws as to tax and Social Security payments to be withheld from wages paid to said employees.

3.7. The DEPARTMENT shall furnish the GRANTEE with such technical assistance and

consultation by the DEPARTMENT staff as is reasonably necessary to assure satisfactory performance in providing the services required by this Grant Agreement.

3.8. The DEPARTMENT shall designate Anne Hairston-Strang,Acting Director/State Forester, DNR Forest Service, 580 Taylor Ave., E-1, Annapolis, MD 21401, 410-260-8501, Anne.Hairston-Strang@maryland.gov or his/her designee, to serve as Project Officer for this Agreement. The GRANTEE shall designate I. Katherine Magruder, Executive Director, Maryland Clean Energy Center, 5000 College Avenue Suite 31010, College Park, MD 20740, 301-314-6061, ikm@mdcleanenergy.org or his/her designee, to serve as Project Officer for this Agreement. All contact between the DEPARTMENT and the GRANTEE regarding all matters relative to this Grant Agreement shall be coordinated through the DEPARTMENT'S and GRANTEE'S designated Project Officers.

3.9. The use of funds under this Grant Agreement by the GRANTEE to hire consultants shall require the prior approval of any such arrangement and the proposed work plan of the consultant(s) involved by the DEPARTMENT, through its Project Officer. (Approval is not required if the Appendix indicates the consultant's use.)

3.10. This Grant Agreement may be amended as the DEPARTMENT and the GRANTEE mutually agree in writing. Except for the specific provision of the Grant Agreement which is thereby amended, the Grant Agreement shall remain in full force and effect after such amendment. Adjustments of funds between categories which do not affect the total authorized funding and are consistent with the objectives of this Grant Agreement do not require an amendment to the Grant Agreement. They must, however, be approved in writing by the Project Officer.

3.11. The GRANTEE shall operate under this Grant Agreement so that no person, otherwise qualified, is denied employment or other benefits on the grounds of race, color, sex, creed, national origin, age, marital status, sexual orientation, or physical or mental disability which would not reasonably preclude the required performance. Except in subcontracts for standard commercial supplies or raw materials, the GRANTEE shall include a clause similar to this clause in all subcontracts. The GRANTEE and each subcontractor shall post in conspicuous places, available to employees and applicants for employment notices setting forth the provisions of this non-discrimination clause.

3.12. The GRANTEE understands that it will comply fully with provisions of the Americans with Disabilities Act. The GRANTEE agrees that it will not directly, or indirectly through contractual or other arrangements, utilize criteria or methods of administration that have the effect of subjecting qualified individuals with disabilities to discrimination on the basis of disability; or that have the purpose or effect of defeating or substantially impairing accomplishment of the objectives of the Department of Human Resources program with respect to individuals with a disability.

3.13. Non-hiring of Employees: No employee of the State of Maryland or any unit thereof, whose duties as such employee include matters relating to or affecting the subject matter of this Grant Agreement, shall, while so employed, become or be an employee of the party or parties hereby contracting with the State of Maryland or any unit thereof.

3.14. Political Contribution Disclosure: The GRANTEE shall comply with Title 14 of the Election Law Article, Annotated Code of Maryland, which requires that every person that enters an agreement with the State, a county, or an incorporated municipality, or their agencies, involving cumulative consideration of $200,000 or more, shall file with the State Administrative Board of Election Laws a statement disclosing contributions in excess of $500 made during the reporting period to a candidate for elective office in any primary or general election. The statement shall be filed with the State Board of Election Laws: (1) when a contract with the State, a county, an incorporated municipality, or their agencies is awarded, and shall cover the preceding two calendar years; and (2) if the contribution is made after the award of a contract, then twice a year, throughout the contract term, on or before: (a) May 31, for the 6-month period ending April 30; and (b)November 30 for the 6-month period ending October 31.

3.15. Unless otherwise provided in the Appendix, the GRANTEE may not, during the term of this Grant Agreement or any renewals or extensions of this Grant Agreement, assign or subcontract all or any part of this Grant Agreement without the prior written consent of the Project Officer.

3.16. Commercial Non-Discrimination: As a condition of entering into this Grant Agreement, upon the Maryland Human Relations Commission's request, and only after the filing of a complaint against the GRANTEE under Title 19 of the State Finance and Procurement Article, as amended from time to time, the GRANTEE agrees to: provide to the State, within 60 days after the request, a truthful and complete list of the names of all subcontractors, vendors, and suppliers that the GRANTEE has used in the past four (4) years of any of its Grant Agreements that were undertaken within the State of Maryland including the total dollar amount paid by the GRANTEE on each subcontract or supply contract. The GRANTEE further agrees to cooperate in any investigation conducted by the State pursuant to the State's Commercial Nondiscrimination Policy as set forth under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland, to provide any documents relevant to any investigation that is requested by the State. The GRANTEE understands and agrees that violation of this clause shall be considered a material breach of this agreement and may result in grant termination, disqualification by the State from participating in State Grant Agreements, and other sanctions.

3.17. All parties hereby expressly acknowledge the possibility of substantial changes in State and federal regulations applicable to this Grant Agreement and expressly agree to renegotiate this Agreement as necessary to comply with such changes; provided that any increase in the scope of work or cost of performance will be compensated for by a budget increase or, in the alternative, by modifying the scope of work to reduce the cost of performance.

3.18. The GRANTEE shall retain all books, records, and other documents relevant to this Grant Agreement for a period of no less than three (3) years after the date of final payment, a resolution of audit findings, or disposition of non-expendable property, whichever is later, and upon receipt of reasonable written notice thereof, full access thereto and the right to examine any of said materials shall be afforded federal and/or State auditors who shall have substantiated in writing a need therefore in the performance of their official duties, and such other persons as are authorized by the DEPARTMENT. The GRANTEE will provide to the DEPARTMENT a copy of that part of any audit performed by State or independent auditors which relates to the

performance of this Grant Agreement and the administration of funds provided by the DEPARTMENT pursuant to this Grant Agreement. Any additional audit information requested by the DEPARTMENT may be secured at its own expense using Department of Human Resources auditors or other State-approved auditors.

3.19. (a) GRANTEE shall obtain written approval of the DEPARTMENT for any purchase of assets with funds paid under this Grant, excluding ordinary office supplies, except that such is not required with regard to purchase of assets described in the Appendix attached hereto.

(b) Title to all property furnished by the DEPARTMENT shall remain in the DEPARTMENT. Title to all property acquired by the GRANTEE at a cost of over FIFTY DOLLARS ($50.00) including purchase by lease-purchase agreement for the cost of which the GRANTEE is to be reimbursed under this grant, shall immediately vest in the DEPARTMENT upon (i) issuance for use of such property in the performance of this grant, or (ii) reimbursement of the cost thereof by the DEPARTMENT, whichever occurs first.

(c) The GRANTEE shall maintain and administer in accordance with sound business practice a program for the maintenance, repair, protection, and preservation of the DEPARTMENT'S property so as to assure its full availability and usefulness for the performance of this grant.

(d) The DEPARTMENT'S property shall, unless otherwise provided herein, or approved in writing by the DEPARTMENT, be used only for the performance of this grant.

(e) In the event that the GRANTEE is indemnified, reimbursed, or otherwise compensated for any loss or destruction of or damage to the DEPARTMENT'S property, it shall use the proceeds to repair, renovate, or replace the DEPARTMENT'S property involved, or shall credit such proceeds against the cost of the work covered by the grant, or shall otherwise reimburse the DEPARTMENT as directed by the DEPARTMENT.

(f) Upon termination of the grant, the DEPARTMENT may require the GRANTEE to deliver to the DEPARTMENT any property specifically produced or acquired for the performance of this grant.

(g) As an alternative to the provisions of (a) - (g), the GRANTEE may elect to furnish property for use in the performance of this grant out of its own funds, for which the DEPARTMENT will reimburse it to the extent of its allocated share of the annual depreciation expense of such property allowed by IRS depreciation schedules.

3.21. Legal.

A. Severability - If any of these provisions shall contravene, or be invalid under, the laws of the particular state, county or jurisdiction where used, such contravention or invalidity shall not invalidate the whole agreement, but the Agreement shall be construed as if not containing the particular provision or provisions held to be invalid in the particular state, county,

or jurisdiction, and the rights and obligations of the parties shall be construed and enforced accordingly.

B. Law Applicable - Unless otherwise authorized by the Board of Public Works, this Agreement shall be governed by the laws of the State of Maryland, and the parties hereby expressly agree that the courts of the State of Maryland shall have exclusive jurisdiction to decide any question arising hereunder.

This Grant Agreement, together with the Appendices attached hereto and incorporated herein by reference, represents the complete, total and final understanding of the parties, and no other understandings or representations, oral or written, regarding the subject matter of this Grant Agreement, shall be deemed to exist or to bind the parties hereto at the time of execution.

IN WITNESS WHEREOF, the parties have executed this Grant Agreement.

Attest:

Witness

For the GRANTEE:

Katherine Magruder
Title: Executive Director
Date: 9/15/21

Attest:

For the DEPARTMENT:

Scharrence Richardson
Signature

Scharrence Richardson
Name

Acting Associate Director of Procurement
Title

10/12/2021
Date

THIS GRANT AGREEMENT APPROVED FOR LEGAL SUFFICIENCY

Rachel Eisenhauer

Rachel Eisenhauer
Acting Assistant Attorney General

10/6/2021

Date

This document may be executed in multiple counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument. Signatures, including notary signatures, provided by electronic means including, by way of example and not of limitation, facsimile, Adobe, PDF, and sent by electronic mail, or via an electronic signature program, shall be deemed to be original signatures.

Appendix A.

Agreement between the Maryland Department of Natural Resources and the Maryland Clean Energy Center on the Management of

DOMESTIC GRANT 21-DG-11094200-099 Between The MARYLAND DEPARTMENT OF NATURAL RESOURCES, And The USDA, FOREST SERVICE REGION 9, STATE AND PRIVATE FORESTRY

FY 2022 and 23

SCOPE OF WORK

Specifically, the MCEC will implement **GRANT 21-DG-11094200-099** as follows:

1. MCEC will develop a job description, advertise the position and interview qualified candidates to select and hire a Wood Energy Project Developer/Coordinator to the staff of the MD Clean Energy Center.

2. MCEC Wood Energy Project Developer/Coordinator will update related marketing and outreach materials highlighting the applicability of wood fuel in mid to large scale commercial and industrial applications.

3. MCEC Wood Energy Project Developer/Coordinator will rank the 3,600 facilities pre-identified by the MEA as having high potential for adoption of wood energy technology solutions; will work to gain audiences with facility managers; and aggressively pursue those facilities for conversion to wood energy.

4. MCEC Wood Energy Project Developer/Coordinator will execute strategies to educate stakeholders involved in climate policy and renewable energy policy; and compile and communicate relevant policy and economic development incentives, such as tax incentives, the various Rural Development grants and loans, State grants and loans, and low-cost financing.

5. In addition to the Wood Energy Project Developer/ Coordinator, MCEC will contract with ACDS, LLC or other highly qualified contractor to assist the Wood Energy Team with technical support, economic impact analyses, and generating 4+ topic reports identified by the Team.

6. MCEC will expend the grant funds over a during the grant term as follows:

a. Contractual Services Management	$19,800.00
b. Coordinator Salaries & Fringe	$160,100.00
c. Outreach & Printed Collateral	$4,200.00
d. Mileage & Travel	$4,000.00
e. Reports	$24,000.00
Total	$212,100.00

7. MCEC shall submit an invoice to the Department in the amount of $112,100 within 20 days of the approval of this agreement and $100,000 July 1, 2022.

8. MCEC will submit a report to the Department within three months following the completion of each quarter for each year of the program. The report shall provide:
   a. Activities for the period and Progress toward the grant deliverables
   b. An itemized accounting of how funds were used to support the initiative
   c. Pictures and/or supporting materials to further describe the activity, and copies of any printed materials produced using grant funding
   d. Other information as required.

9. MCEC will submit a final report within two months of the end of the grant period. The report shall provide;

10. The Department will implement **DOMESTIC GRANT 21-DG-11094200-099 Between The MARYLAND DEPARTMENT OF NATURAL RESOURCES, And The USDA, FOREST SERVICE REGION 9, STATE AND PRIVATE FORESTRY** as follows:
    a. Provide a total of $112,100.00 in FY22 and $100,000 in FY23
    b. Continue to provide to the MCEC technical assistance, program input and sharing of information of mutual interest
    c. Collaborate with the MCEC on the day to day management support needed to carry out the tasks necessary to accomplish the goals of the grant.

DocuSign

Certificate Of Completion

Envelope Id: 2A7D4637720943148C15EC792EFC86E7
Status: Completed
Subject: MCECDNRWood Energy GRANT AGREEMENT Signed 9.15.21_SRedits.pdf
Source Envelope:

Document Pages: 11	Signatures: 1	Envelope Originator:
Certificate Pages: 1	Initials: 0	Rachel Eisenhauer
AutoNav: Enabled		rachel.eisenhauer@maryland.gov
EnvelopeId Stamping: Disabled		IP Address: 64.207.219.71
Time Zone: (UTC-08:00) Pacific Time (US & Canada)		

Record Tracking

Status: Original 10/6/2021 8:55:57 AM	Holder: Rachel Eisenhauer rachel.eisenhauer@maryland.gov	Location: DocuSign

Signer Events	Signature	Timestamp
Rachel Eisenhauer rachel.eisenhauer@maryland.gov 8/9/21 Security Level: Email, Account Authentication (None)	Rachel Eisenhauer Signature Adoption: Pre-selected Style Using IP Address: 167.102.37.34	Sent: 10/6/2021 8:55:58 AM Viewed: 10/6/2021 8:56:02 AM Signed: 10/6/2021 8:56:35 AM Freeform Signing

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	10/6/2021 8:55:58 AM
Certified Delivered	Security Checked	10/6/2021 8:56:02 AM
Signing Complete	Security Checked	10/6/2021 8:56:35 AM
Completed	Security Checked	10/6/2021 8:56:35 AM

Payment Events	Status	Timestamps

EDA Maryland Energy Innovation Accelerator Grant

The Maryland Energy Innovation Accelerator (MEIA) is the venture development offered by MCEC, focused on commercializing advanced energy and climate technologies developed at Maryland-based businesses, universities, and laboratories.

MEIA supports solar, wind, batteries, energy efficiency, grid modernization, carbon capture utilization and storage (CCUS), and any other technology that reduces greenhouse gas emissions or provides negative emissions benefits in the electric, oil and gas, commercial, or industrial sectors.

MEIA provides climate tech ventures access to domain experts, experienced executives, co-founders, investors, strategic partners, professional services, and project management support to execute commercialization milestones.

FY 2023 Innovation Advancement Goals:

- Accelerate the commercialization of clean tech discoveries in Maryland to marketable products and services
- Promote business and job creation in the clean tech sector for Maryland

Key Innovation Advancement Objectives:

- Identify promising technologies developed in Maryland
- Identify and onboard technologies from universities and labs into high-quality startups
- Facilitate Maryland Climate Tech ventures with important market actors
- Recruit and onboard Energy Executives in Residence (EEIR) to take roles as co-founders or advisors
- Connect Maryland Climate Tech ventures with needed capital
- Provide technical assistance with the development of commercialization plans
- Generate sponsorship and tech-to-market income to offset costs to operate MEIA above the State of Maryland contribution

Innovation Impact Metrics Graphic:

	FY 2023 Totals	FY 2022 Totals	FY 2021 Totals	FY 2020 Totals	Cumulative Totals
Number of Companies Formed	7	6	0	1	14
Number of Companies Served	16	17	22	5	60
Number of Full-time Jobs Created	34	7	8	0	49
Number of Part-time Jobs Created	25	3	2	0	30
Third-Party Capital Investment	$3,888,250	$1,800,000	$3,200,000	$-	$8,888,250
Grant and Sponsorship Revenue for Teams	$26,815,000	$2,325,000	$656,000	$-	$29,796,00
MEIA Tech to Market Fee Income	$27,000	$26,639	$65,000	$25,000	$143,639

In September 2022, MCEC was awarded a threeyear grant totaling $750,000 from the U.S. Economic Development Administration (EDA) to support the Maryland Energy Innovation Accelerator. The award is part of EDA's 2021 Build to Scale Venture Challenge, which seeks to leverage regional competitive strengths to accelerate innovation and job creation through high-growth technology entrepreneurship and fostering inclusive access to proven entrepreneurship support models.

MEIA launched its first cohort in January 2020. In its first 30 months, it worked with (and continues to work with) 44 Startups that generated significant incremental economic development impact to the State of Maryland after enrolling in a MEIA program. MEIA provides three programs that represent a three-tiered approach that moves technology from concept to demonstration:

1. Pre-Accelerator - A two-month customerdiscovery program for the earliest technologies from universities and labs;
2. Launchpad - A six-month commercialization planning program for high-potential technologies in universities or labs
3. Accelerator - A six+ month program for established companies looking to fill senior roles, demonstrate technology, and obtain third-party capital investment.

The program also received local foundation support through a $10,000 award from the Butz Foundation

LAUNCHPAD AND ACCELERATOR TEAMS

TEAM NAME	TECHNOLOGY	ENTRY DATE	AFFILIATION	STATUS
CUPTech	Upcycling of plastics	Spring 2021	JHU	Graduated from Launchpad
InventWood	Wood replacement for steel	Spring 2021	UMD	Graduated from Accelerator
ATP-MD	Biomass to value	Summer 2021	None	Graduated from Accelerator
Dynami Battery	Battery printing technology	Summer 2021	None	Graduated from Accelerator
Rechargeable Zinc Battery (RZB)	Zinc battery for wearable applications	Summer 2021	UMBC	Graduated from Launchpad
EDAC Labs	Direct air capture of carbon dioxide	Fall 2021	JHU	Graduated and Incorporated
Living Canopies	Ecofriendly bus shelters	Spring 2022	UMD	Accelerator participant
HighT-Tech	Catalyst manufacturing	Spring 2022	UMD	Accelerator participant
Alchemity SOFC	Low-temperature SOFC	Spring 2022	UMD	Launchpad participant and Incorporated
Carbon Lockdown	Wood harvest and burial for carbon seques-tration	Spring 2022	UMD	Launchpad participant and Incorporated
Ionic Devices	Battery built using semiconductor manufacturing	Spring 2022	UMD	Launchpad participant
Liatris	Fire-resistant insulation	Spring 2022	UMD	Accelerator participant
Archer Power Solution	Battery-operated air conditioner "off-grid" use	Spring 2023	None	Accelerator participant
Aquatic Circle	Advanced water filtration system	Spring 2023	None	Accelerator participant
WH Power	Low-temperature batteries	Spring 2023	UMD	Launchpad participant
Cooling – X	Paint for solar reflection	Spring 2023	UMD	Launchpad participant
ETCH	Converts natural gas into hydrogen and solid carbon	Spring 2023	JHU	Launchpad participant

To form or augment Startup Teams, MEIA recruits and engages experienced, industry-specific business executives and entrepreneurs ("energy executives") who want to become founders or executives of the Startup to perform its commercialization activities.

This energy executive model creates higher quality leadership teams that, when combined with great technology, produce the investible Maryland-based companies that form the foundation of an emerging economic cluster In FY 2023, there was a leadership change in MEIA as former MEIA Director Brian Toll became senior advisor, replaced by current Director Wade. MEIA now has an Associate Director, Mike Ducker, and Teams Coordinator, Emily Sheppard to support operational programming. In addition, MEIA is supported by the MCEC communication team with additional operation and admin support from MCEC staff.

In June 2023, MEIA hosted a Pitch Competition Finale. The virtual event culminated months of work by teams participating in MEIA's accelerator programs. Four Startup Teams pitched their innovative clean energy product or service to a panel of climate focused investors who judged the competition. College Park based Alchemity was named the Grand Prize winner and awarded a $1,000 Grand Prize sponsored by the Maryland Department of Commerce.

Multiple organizations provide financial and in-kind support to MEIA and its participating Startups.

MEIA Key Funders & Supporters

Maryland Clean Energy Center, The Butz Foundation, Maryland Energy Innovation Institute, Johns Hopkins Ralph O'Connor Sustainable Energy Institute, U.S Economic Development Administration (EDA), Banner Witcoff, Nemphos Braue, Whiteford Law, Points North.

FORM **CD-450**
(REV 10/18)

U. S. DEPARTMENT OF COMMERCE

FINANCIAL ASSISTANCE AWARD

☒ GRANT ☐ COOPERATIVE AGREEMENT

RECIPIENT NAME MARYLAND CLEAN ENERGY CENTER	FEDERAL AWARD ID NUMBER **ED21HDQ0240086**
	PERIOD OF PERFORMANCE 10/01/2021-09/30/2024
STREET ADDRESS 5000 COLLEGE AVE STE 31010	FEDERAL SHARE OF COST $750,000.00
CITY, STATE, ZIP CODE COLLEGE PARK MD 20740-3809	RECIPIENT SHARE OF COST $865,488.00
AUTHORITY EDA's Regional Innovation Strategies (RIS) Program is authorized by Section 27 of the Stevenson-Wydler Technology Innovation Act of 1980; 15 U.S.C. 3722, as	TOTAL ESTIMATED COST $1,615,488.00

CFDA NO. AND NAME

11.024 Build to Scale

PROJECT TITLE

The Maryland Energy Innovation Accelerator (MEIA) is a venture development program that focuses on commercializing advanced energy and climate technologies in Maryland

This Award Document (Form CD-450) signed by the Grants Officer constitutes an obligation of Federal funding. By signing this Form CD-450, the Recipient agrees to comply with the Award provisions checked below and attached. Upon acceptance by the Recipient, the Form CD-450 must be signed by an authorized representative of the Recipient and returned to the Grants Officer. If not signed and returned without modification by the Recipient within 30 days of receipt, the Grants Officer may unilaterally withdraw this Award offer and de-obligate the funds.

☒ DEPARTMENT OF COMMERCE FINANCIAL ASSISTANCE STANDARD TERMS AND CONDITIONS

☐ R & D AWARD

☐ FEDERAL-WIDE RESEARCH TERMS AND CONDITIONS, AS ADOPTED BY THE DEPT. OF COMMERCE

☐ BUREAU SPECIFIC ADMINISTRATIVE STANDARD AWARD CONDITIONS

☐ SPECIFIC AWARD CONDITIONS

☒ LINE ITEM BUDGET

☒ 2 CFR PART 200, UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS, AS ADOPTED PURSUANT TO 2 CFR § 1327.101

☐ 48 CFR PART 31, CONTRACT COST PRINCIPLES AND PROCEDURES

☒ DEPARTMENT OF COMMERCE PRE-AWARD NOTIFICATION REQUIREMENTS FOR GRANTS AND COOPERATIVE AGREEMENTS (REF: 79 FR78390)

☐ MULTI-YEAR AWARD. PLEASE SEE THE MULTI-YEAR SPECIFIC AWARD CONDITION.

☒ OTHER(S):

EDA Specific Award Conditions (including Scope of Work)

This award is being made under competitive Funding Opportunity Number EDA-HDQ-OIE-2021-B2S posted at Grants.gov on 02/23/2021.

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER Eric Smith	DATE 09/20/2021
PRINTED NAME, PRINTED TITLE AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL Brian Toll	DATE 10/13/2021

DOE Mid- Atlantic PACE Alliance

The Mid-Atlantic PACE Alliance (MAPA) is a partnership between stakeholders in Virginia, Maryland, and the District of Columbia to accelerate the implementation of Commercial PACE programs and projects in the region.

The Mid-Atlantic PACE Alliance is a collaboration between the Virginia Department of Mines, Minerals, and Energy (DMME), the District of Columbia Department of Energy and Environment (DOEE), the Maryland Clean Energy Center (MCEC), and other industry and non-for-profit partners.

John W. Warren
Director

DIVISIONS
ENERGY
GAS AND OIL
MINED LAND RECLAMATION
MINERAL MINING
GEOLOGY AND MINERAL RESOURCES
MINES
ADMINISTRATION

COMMONWEALTH OF VIRGINIA

Department of Mines, Minerals and Energy
1100 Bank Street / 8th Floor
Washington Building
Richmond, Virginia 23219-3402
(804) 692-3200 FAX (804) 692-3237
www.dmme.virginia.gov

CONTRACT

Department of Mines, Minerals and Energy
and
Maryland Clean Energy Center

Contract Number: C17-6048

This **Contract,** entered into this 4 day of APRIL, 2017, is between Maryland Clean Energy Center (MCEC), hereinafter called the "Grantee," and the Department of Mines, Minerals and Energy (DMME).

SCOPE OF WORK: DMME will support and Grantee will implement the Project entitled: **The Mid-Atlantic PACE Alliance: Transforming and Standardizing Property Assessed Clean Energy Markets in Washington, DC, Maryland and Virginia,** as further described in this contract and in greater detail in the following attachments:

1. *Attachment 1 – Statement of Project Objectives (SOPO) and Milestone Summary Table,*
2. *Attachment 2 – Appendix A, Federal Special Terms and Conditions,*
3. *Attachment 3 – Appendix B, State Terms and Conditions,*
4. *Attachment 4 – Intellectual Property Provisions, and*
5. *Attachment 5 – Federal Assistance Reporting Checklist and Instructions.*

PERIOD OF PERFORMANCE: The Grantee will undertake the Project from January 1, 2017 through December 31, 2019.

PROJECT BUDGET: The Grantee is awarded a total of **$99,688** for the undertaking of this 3-year Project.

COMPENSATION AND METHOD OF PAYMENT: Upon receipt and approval of invoices with proper documentation submitted generally no more frequently than once monthly, the Grantee shall be reimbursed by DMME in accordance with agency and Commonwealth payment policies. Grantee shall use an invoice format provided by DMME.

Documentation of expenditures for the Contract award during the invoice period must be submitted with each invoice. Acceptable documentation includes, but is not limited to, invoices, cancelled checks, time sheets, comptroller's reports, or other documentation subject to approval by DMME.

Invoices shall generally be based on incremental progress towards completion of the milestones/metrics contained in Attachment 1. Grantee may receive fund advances for anticipated expenses if such advances are provided in close proximity to expenditure needs.

REPORTING: The Grantee shall consult that portion of Attachment 2 entitled "Appendix A - Special Terms and Conditions", and Attachment 5, "Federal Assistance Reporting Checklist and Instructions" for reporting guidance. Failure to comply with the reporting requirements of this contract will be considered a material noncompliance with terms of the contract and may result in termination of the contract.

COMPLIANCE WITH FEDERAL RULES AND REGULATIONS: Funding for this Contract is authorized through the Catalog of Federal Domestic Assistance (CFDA) #81.119. Expenditures made and services provided pursuant to this Contract shall be in accordance with 2 CFR Part 225, "Cost Principles for State, Local, and Indian Tribal Governments" (OMB Circular A-87), and OMB Circular A-133, "Audits of States, Local Governments and Non-Profit Organizations." The Grantee shall adhere, and require adherence by all subcontractors performing work required by this agreement, to the federal rules as noted.

The Grantee is advised to comply with all the provisions in 2 CFR Part 200 as amended by 2 CFR Part 910 at http://www.eCFR.gov and that all contracts must include the provisions in 10 CFR 200.318, Financial Assistance Rules on "Procurement", 2 CFR 200.326, "Contract Provisions"; and Appendix II to 2 CRF Part 200, "Contract Provisions for Non-Federal Entity Contracts under Federal Awards." The Grantee is further advised to comply with all requirements of 41 USC 702, "Drug-free workplace requirements for Federal grant recipients"; and 10 CFR Part 420 – State Energy Program, as well as the Intellectual Property terms of this award found in Attachment 4.

SPECIAL TERMS AND CONDITIONS: The Grantee must comply with other specific SEP terms and conditions, including requirements for Transparency and Accountability, and Other Special Environmental Terms and Conditions (e.g., NEPA requirements, Buy American assurances) which are included in portions of Attachment 2.

HISTORIC PRESERVATION: For guidance on compliance with provisions of the National Historic Preservation Act, Grantee shall consult that portion of Attachment 2 entitled Historic Preservation.

CONTRACT DOCUMENTS: The agreement shall consist of the following, all of which documents are incorporated herein:

1. *This signed Contract,*
2. *Attachment 1 – Statement of Project Objectives (SOPO) and Milestone Summary Table,*
3. *Attachment 2 – Appendix A, Federal Special Terms and Conditions,*
4. *Attachment 3 – Appendix B, State Terms and Conditions,*
5. *Attachment 4 – Intellectual Property Provisions, and*
6. *Attachment 5 – Federal Assistance Reporting Checklist and Instructions*

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

Maryland Clean Energy Center

By: _____

I. Katherine Magruder

Title: Executive Director

Date: 4/4/17

DMME

By: _____

John W. Warren

Title: DMME Director

Date: 4/17/2017

FEIN: 28-3864715

DUNS: N/A

Address:

MD Clean Energy Center.
1212 West St., Suite #200
Annapolis, MD 21401

Phone for POC:

(443)949-8505

DIVISIONS
ENERGY
GAS AND OIL
MINED LAND RECLAMATION
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www.dmme.virginia.gov

CONTRACT MODIFICATION AGREEMENT

Date: December 9, 2019

Contract No.: C17-6048

Modification No.: 1

Issued By: COMMONWEALTH OF VIRGINIA,

Department of Mines, Minerals and Energy
Division of Energy
1100 Bank Street, 8th floor
Washington Building
Richmond, VA 23219-3402

Contractor: Maryland Clean Energy Center
5000 College Ave., suite #31010
College Park, MD 20740

Commodity: This Supplemental Agreement is entered into pursuant to the provisions of the basic contract.

Description of Modification: Increase amount of award from $99,688 to $119,688 by mutual agreement by DMME and Contractor. Contractor will complete additional tasks to include marketing plan. End date of contract period of performance is changed from December 31, 2019 to June 30, 2020. All other terms and conditions remain unchanged.

IN WITNESS WHEREOF, the parties execute this modification.

Maryland Clean Energy Center

By: Katherine Magruder

Print Name: I. Katherine Magruder
Title: Executive Director

Date: 12/9/19

Virginia Dept. of Mines, Minerals and Energy

By: _____
John Warrren, Director

Date: 12/27/19

DIVISIONS
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GAS AND OIL
MINED LAND RECLAMATION
MINERAL MINING
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CONTRACT MODIFICATION AGREEMENT

Date: June 29, 2020

Contract No.: C17-6048

Modification No.: 2

Issued By: COMMONWEALTH OF VIRGINIA,

Department of Mines, Minerals and Energy
Division of Energy
1100 Bank Street, 8th floor
Washington Building
Richmond, VA 23219-3402

Contractor: Maryland Clean Energy Center
5000 College Ave., suite #31010
College Park, MD 20740

Commodity: This Supplemental Agreement is entered into pursuant to the provisions of the basic contract.

Description of Modification: End date of contract period of performance is changed from June 30, 2020 to December 31, 2020. All other terms and conditions remain unchanged.

IN WITNESS WHEREOF, the parties execute this modification.

Maryland Clean Energy Center

By: Katherine Magruder

Print Name: I. Katherine Magruder
Title: Executive Director

Date: 6/29/2020

Virginia Dept. of Mines, Minerals and Energy

By: John Warren

John Warrren, Director

Date: 7/6/2020

2023 Annual Report Statistics

EXHIBIT I: MCEC FINANCE PRORGAMS IMPACT METRICS

FINANCE PROGRAM IMPACT METRICS

	FY 2023 Totals	**FY 2022** Totals	**Cumulative** Totals (As of June 30, 2023)
Leveraged Investment (public to private $$)	$29,304,705	$35,789,501	**$185,169,484**
Leveraged Ratio	23.5x	10.2x	**13.4x**
MCAP Income Generated	$5,000	$50,000	**$110,990**
MCAP Deals Closed	0	1	**6**
Project Finance Pipeline Projects	12	10	**N/A**

EXHIBIT II. MCEC Cumulative Bond Issuance

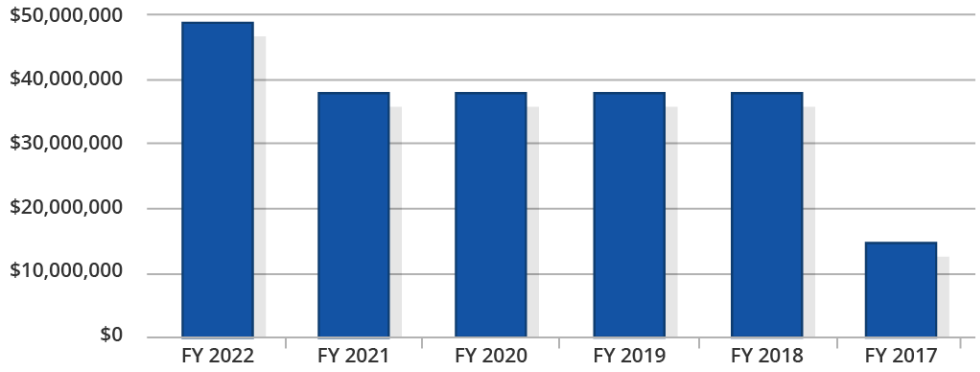

EXHIBIT III. MCEC Procurement & Technical Assistance Services KPI Impact Metrics:

PROCUREMENT AND TECHNICAL ASSISTANCE SERVICES (PTAS) IMPACT METRICS

	FY 2023 Total	**FY 2022** Total	**Cumulative** Totals
Fee-for-Service Income Generated	$79,650	$51,454	$188,326
Project Procurement, Technical Support & Management MOUs Executed	9	3	14
Internal Contract Solicitations	6	4	12
Internal Contract Awards	20	4	26
Value of Internal Awards	$117,748	$34,188	$151,936
% MBE Goals Met - Internal	100%	100%	--
External Contract Solicitations	3	0	12
External Contract Awards	11	41	54
Value of External Awards	$12,393,109	$43,924,107	$61,318,367
% MBE Goals Met - External	105%	100%	--

EXHIBIT IV. MCEC Cumulative Project Outcomes & Meaningful Benefits:

ANNUAL ENERGY SAVINGS

	FY 2023 Total	FY 2022 Total	Cumulative Totals (As of June 30, 2023)
FEE INCOME GENERATED			
Fee-for-Service	$79,650	$51,454	$188,326
Project Procurement, Technical Support & Management MOUs	12	2	4
ENERGY-RELATED OUTCOMES OF PROJECTS			
kWh Saved	18,445,619	18,533,980	125,979,599
kWh Cost Savings	$1,752,249	$1,675,905	$9,920,558
kWh Renewable Generation	0	0	0
kWh Storage Capacity	0	0	0
BTU Therms Saved	206,570	176,963	1,312,543
BTU Cost Savings	$156,277	$71,968	$711,869
Therms Generated	0	0	0
Industry Job Hours (CEA, MDPACE & MCAP)	101,920	535,268	2,949,796
CLIMATE IMPACT (greenhouse gas reduction, carbon capture)			
Greenhouse Gas Reduction (Tons-NOx, SOx & Methane)	0	0	0
CO_2 Avoided (MT)	1,293	1,534	7,761
Water / Sewer Conservation	36,697	28,106	216,641
Water / Sewer Conservation Cost Savings	$178,976	$149,157	$1,194,991
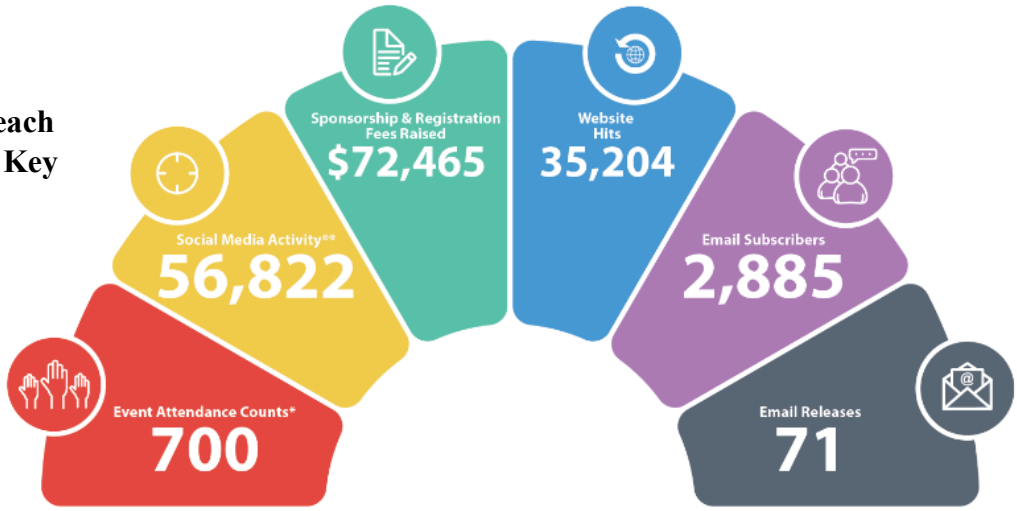
EXHIBIT V. MCEC Outreach & Education Key Performance Indicators