



Request for Proposal for Construction Management Services

RFP 08-20

Proposals due by 5 PM EDT, November 11, 2020

**Issued by:
Planet Found Energy Development, LLC
107 Market Street
Pocomoke City, MD 21851**

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1 Purpose

Planet Found Energy Development, LLC (“PFED” or “owner”) is soliciting Construction Management Agent of the owner (CMA) proposals for the construction of a new anaerobic digestion and nutrient recovery (ADNR) facility to be located on an 8-10 acre parcel in Princess Anne, Maryland. The facility will treat up to 30,000 short tons of combined poultry litter and dissolved air flotation (DAF) poultry renderings annually, generating up to 14,500 m³/day of biogas that will, in turn, produce an estimated 1.0 MW of continuous electric power in conjunction with an estimated 2,300 m³/day of upgraded renewable natural gas (RNG). In addition, the facility will produce approximately 410 m³/day of agricultural and horticultural field amendments, potting soils and fertilizers to be marketed under PFED’s commercial brand line. The total cost of the project including all fees and Owner expenses is \$16,670,000. All work is to achieve substantial completion by June 1, 2022 and final completion by September 1, 2022. PFED intends to award the CMA contract to a qualified organization based on expertise, qualifications, cost and the requirements set forth herein.

2 Background

2.1 Context of the Facility

On May 24, 2018, the Maryland Energy Administration (MEA) and Planet Found Energy Development, LLC (PFED), entered into a contract to explore and evaluate the possible construction of a combined anaerobic digestion and nutrient recovery (ADNR) facility treating poultry industry waste in Princess Anne, Maryland. On May 29, 2019, MEA endorsed the proposed project by providing a \$2MM grant towards facility financing.

The proposed ADNR facility would seek to introduce a market-based solution to the current waste management problems facing Maryland’s agricultural community. The poultry industry represents a significant proportion of the economy on the Delmarva Peninsula, accounting for more than 21,000 jobs, contributing more than \$1.05 billion per year in salaries and wages, and generating almost \$1.4 billion in additional local revenue from feed and material purchases annually¹. At the same time, the high concentration of poultry growing operations has resulted in the production of large volumes of waste, ranging from poultry litter generated on farms to dissolved air flotation (DAF) waste produced at poultry industry rendering facilities. In 2019, these two waste streams represented approximately 400,000 tons of litter and over 60 million gallons of DAF^{2,3} in Maryland, both of which rely on field application as the primary means of disposal. These facts, combined with the State of Maryland’s recent implementation of the Phosphorus Management Tool (PMT), which places increased restrictions and regulatory oversight on the application of poultry litter on agricultural land, has created an atmosphere of economic uncertainty as the poultry industry seeks to manage its excess waste. The proposed ADNR facility aims to mitigate portions of this excess waste and produce meaningful byproducts in the form of renewable energy and value added soil and fertilizer products.

2.2 Maryland’s Phosphorus Management Tool (PMT)

Maryland’s PMT regulations were signed into law in late 2015 in response to limits set by the U.S. Environmental Protection Agency (EPA) on nutrient and sediment runoff into the Chesapeake Bay. Together with the six Chesapeake Bay Region states, the State of Maryland has worked to develop

Watershed Implementation Plans (WIPs) to lay out mechanisms to meet the EPA limits, and its PMT regulations are a component of these overall commitments. Developed with input from the University of Maryland system and the state's agricultural community, the PMT incorporates a tool to identify agricultural fields with a high risk for phosphorus runoff into surrounding groundwater and, ultimately, the Chesapeake Bay. Using mandated soil test reports, the tool tiers fields into low risk, medium risk and high risk groups, and proceeds to define timelines for further regulations. The 2020 PMT update provides the following⁴:

- The highest risk group (FIV >450) began transitioning to the PMT in 2018. It includes 96 operations managing 10,894 acres throughout the state.
- The medium risk group (FIV 300-449) began transitioning to the PMT in 2019. It includes 252 operations managing 54,271 acres.
- The low risk group (FIV 150-299) begins transitioning to the PMT in 2020. This group includes 1,313 operations managing 122,705 acres.

The PMT will be fully implemented by all groups by July 1, 2022.

Once the PMT regulations are applied to a field, a transitional phase-in period begins. During this process, soil testing – in combination with information on landscape position, land type and management, climate, etc. – is used to determine a specific field's legal eligibility to accept phosphorus as a fertilizer. If a field is impacted, farmers will be expected to apply only maintenance levels of phosphorus or halt application altogether. This, in turn, will require farmers to substitute phosphorus-free, inorganic (commercial) fertilizer for poultry litter and other manures, which inherently contain phosphorus. MDA's estimated cost increase for farmers transitioning to new farming methods under the PMT is \$34.09/acre/year adjusted for inflation, primarily the result of increased nitrogen and potassium fertilizer costs relative to the current status quo⁵.

As noted above, the PMT will be fully implemented by summer 2022, with the greatest impacts being felt on the Lower Eastern Shore of Maryland where soil phosphorus levels are generally highest. Since poultry litter is a high-phosphorus containing material (generally 2-3% by dry weight), this is expected to have a large impact on the region's poultry litter market, where nearly 70% of all agricultural land is expected to fall under the PMT regulations⁶.

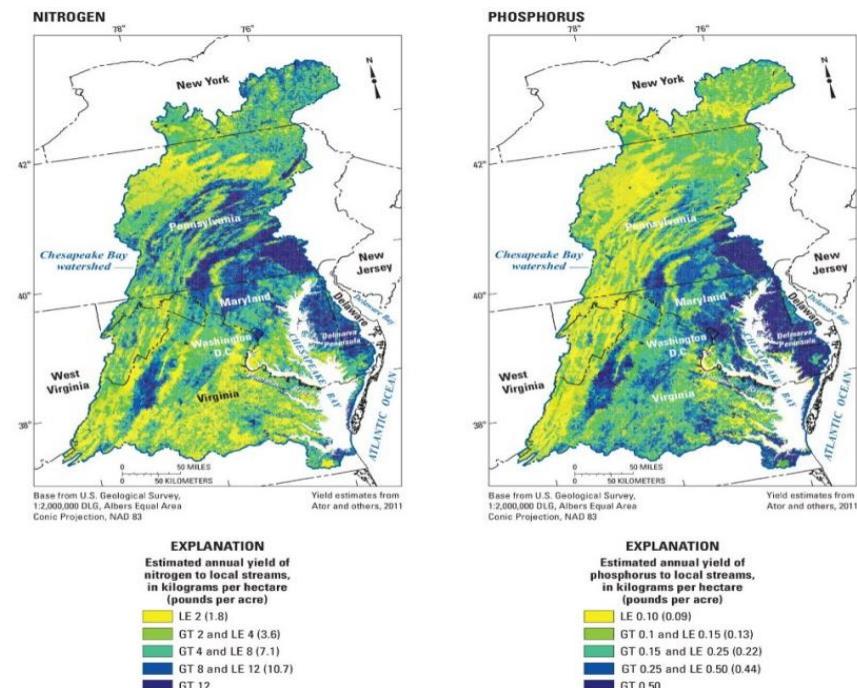


Figure 1 - Soil nutrient levels in the Chesapeake Bay region. The highest levels of phosphorus are located on the Delmarva Peninsula and, specifically, the Lower Eastern Shore. Image credit: Chesapeake Bay Foundation

2.3 Planet Found Energy Development, LLC (PFED)

PFED is a Maryland-based limited liability company composed of scientists, farmers, and businessmen dedicated to developing manure management technologies that safeguard the environment, economic viability and lifestyle of agricultural communities in the Chesapeake Bay Region and beyond. PFED has continuously operated a farm-scale pilot ADNR facility in Pocomoke City, MD, since spring 2017, generating renewable energy exclusively from poultry litter while creating anaerobically digested soil products with adjusted and non-adjusted nutrient content from the facility's effluent, as well as a concentrated phosphorus fertilizer. This phosphorus fertilizer represents 80-85% of the original phosphorus contained in the processed poultry litter, meaning that PFED's other nutrient-adjusted products have significantly less phosphorus, a nutrient ratio more suitable for the high-phosphorus soils of Maryland's Eastern Shore, and a ready agricultural market. The pilot facility serves as an important tool in testing new treatment methods for future iterations of PFED's process.

PFED has established itself as the only poultry litter digestion facility operating an entirely closed loop, zero discharge system in the United States, and it holds a patent on the deployed process (US 10,384,982)⁷. Since 2013, it has worked in collaboration with State of Maryland agencies, primarily the Maryland Department of Agriculture (MDA) and Maryland Energy Administration (MEA), to advance poultry litter management and waste-to-energy implementation on the Eastern Shore of Maryland. It has also frequently partnered with the University of Maryland system in research exploring poultry litter AD and various aspects of agricultural nutrient recovery. It has received over \$320 thousand in R&D grant funding, \$4.1 million in facility and process grants (including \$2 million from MEA towards this pending facility's financing), and \$2.5 million in private investment. PFED will be the owner/operator of the planned facility.

In Spring 2020, the company introduced a soil conditioner and fertilizer product line into the Maryland marketplace. This product line features anaerobically digested potting soil blends produced exclusively from the company's pilot facility. These products feature healthy organic nutrient profiles for plants, a pleasant, earthy odor, and low pathogenicity. More information can be found at elementsoil.com.

2.4 Princess Anne, Maryland

Princess Anne was founded in 1733 and is the county seat of Somerset County, Maryland. It is a low-income community with a population of around 3,400, most of whom (41%) work for the state and local governments⁸. The State of Maryland is the town's largest employer, and the jobs that they provide are more or less equally divided between the Eastern Correctional Institution and the University of Maryland Eastern Shore⁸ – an Historically Black College and University (HBCU) that is one of four in the State of Maryland. Since its inception, the university has grown to encompass 745 acres and has become a regional leader in higher education teaching, research, and doctoral training. It is also a largely residential university with close ties to the surrounding community and regional industry, yet its student body represents residents of over 70 countries, furthering its mandate of fostering multicultural diversity in its instruction and outreach.

Geographically, UMES is at the epicenter of Maryland's agricultural community located on the Lower Eastern Shore of Maryland. It is 20 miles south of Salisbury, MD, and is within 150 miles of



Figure 2 - Princess Anne, MD, is the county seat of Somerset County on the Lower Eastern Shore of Maryland.
Image credit: Google Earth Pro.

many of the mid-Atlantic's largest populations centers, including Annapolis, MD, Baltimore, MD, Norfolk, VA, Philadelphia, PA, Washington, DC, and Wilmington, DE. The campus is easily accessible, with major highway and rail networks linking it more or less directly to these major metropolitan centers, while the surroundings are lush and rural, consisting of agricultural land and forest interspersed with streams, rivers and wetlands, all of which are surrounded by marsh and the saltwater of the Chesapeake Bay to the west and the Atlantic Ocean to the east.

3 Definitions

American Institute of Architects (AIA) Billing – Industry standard billing method used to simultaneously submit invoices, account for project status, and provide a preemptive method for resolving billing disputes. See <https://www.aiacontracts.org/contract-documents/19661-application-and-certificate-for-payment> for more information.

Anaerobic Digestion and Nutrient Recovery (ADNR) – The combined process of anaerobic digestion and post-digestion physical and chemical separation of digestate into discrete field amendments, fertilizers and soil conditioners

Construction Management Agent of the Owner (CMA) – The contractor responding to this RFP, responsible for the Scope of Work defined in Section 4.1.

Engineering Design-Build Team – Third-party entity tasked with contributing to conceptual design and entirely responsible for design engineering, the generation of construction documents associated with the project, and the execution of facility construction

Forensic Engineering – The investigation and determination of the causes of structural failures of constructed facilities, as well as the rendering of opinions and provision of testimony in judicial proceedings

Organizational Conflicts of Interest (OCI) – Instances in which an awarded CMA has a recent, current or anticipated business relationship with the Engineering Design-Build Team and/or any other project contractor or prospective vendor, where such relationship in reality or in appearance impacts the CMA's ability to impartially and objectively provide the required services to the Owner, or where it provides a contractor with an unfair competitive advantage

Owner – Planet Found Energy Development, LLC

Project Management Plan (PMP) – A planning document representing the entire project, detailing all phases of the project from initiation to planning, execution and close-out

Project Team – The collection of entities involved in facility planning, design and construction, including but not limited to the Owner, CMA, and Engineering Design-Build Team.

Proposing Entity – An individual or established business, corporation, partnership, sole proprietorship, joint stock company, joint venture, firm, or other entity engaged in the practice of providing construction management services and that is providing a proposal in response to this RFP

Renewable Natural Gas (RNG) – Upgraded biogas capable of meeting natural gas pipeline quality thresholds

4 Scope of Work

4.1 Scope of Work

The services requested will be for pre-construction services and construction services as detailed below:

1. Serve as Owner's agent during pre-construction and as CMA during the construction phase of the process.
2. Generate a Project Management Plan (PMP) in coordination with the Owner.
3. Provide a detailed project schedule within the PMP, including sites and phasing. Provide regular schedule updates.
4. Oversee the selection of the Engineering Design-Build Team, including the advertising of the request for bids, securing bids, analyzing bid results, and furnishing recommendations on

- award of contracts in collaboration with PFED.
5. Develop detailed cost estimates for all phases of the project based on design engineering.
 6. Provide review and comment during all phases of design and construction document preparation.
 7. Coordinate any necessary equipment or systems testing at PFED's pilot facility in collaboration with PFED.
 8. Facilitate pre-construction phase administration including oversight of all applicable permitting and coordination of design engineering oversight with PFED.
 9. Coordinate and document communications with and among the Project Team, manufacturers and any other contractors, including the management and documentation of all project meetings.
 10. When and where capabilities allow, collaborate with Owner in the development and finalization of energy offtake agreements.
 11. Track cost estimates against budgets on a minimum monthly basis.
 12. Provide comprehensive construction phase administration which would include:
 - a) Full-time construction supervision;
 - b) Project management and inspection of work;
 - c) Documentation and coordination of any Engineering Design-Build Team requests for changes to the project;
 - d) Documentation and coordination of Project Team payment requests using the AIA billing method, as well as invoicing from equipment manufacturers and vendors;
 - e) Performance of forensic engineering and analysis on any construction failures
 - f) Performance of claim analysis;
 - g) Performance of commissioning services in collaboration with the Owner; and
 - h) Performance of project close-out services;
 13. Avoid Organizational Conflicts of Interest.
 14. Maintain Workers' Compensation, Employers' Liability, Commercial General Liability, Automotive Liability, Excess/Umbrella Liability and Professional Liability Insurance commensurate with the requirements of the Scope of Work.
 15. Ensure that all members of the Project Team, meeting attendees or site visitors and/or contractors maintain in good working order all necessary personal protective safety equipment as required for the type of work in accord with the latest Occupational Safety and Health Administration (OSHA), Maryland Occupational Safety and Health Act (MOSHA), Environmental Protection Agency (EPA), and Centers for Disease Control (CDC) guidelines, rules and regulations.

NOTE: The CMA will not be allowed to self-perform or bid any divisions of the work.

The project's schedule, expected permits, tentative site layout and schematics are included as subsections of this RFP, below. The project's material budget and a significant amount of background material and additional detail is included for reference within a comprehensive feasibility study, provided upon request to responding entities (see Section 6 for contact information).

4.1.1 Project Phasing

To further clarify, the project will be logically broken down into two phases from the perspective of PFED:

1. Phase 1 will entail the onboarding of the CMA firm selected as a result of this solicitation, as well as the collaborative generation between the CMA and PFED of an effective RFP for engineering design-build services from a third party contractor.
2. Phase 2 will entail all remaining phases of project development. The CMA will be responsible for the successful execution of these phases by providing oversight of the third-party engineering design-build team and ensuring the successful implementation of PFED's vision for the ADNR facility in keeping with Section 4.1.

4.2 Qualifications

Each applicant must possess the following minimum qualifications:

1. The Proposing Entity should have the organizational, human and technical resources in-house to perform the tasks listed in Section 4.1 in an efficient and economical manner consistent with the interests of the Owner.
2. The Proposing Entity, or its key individual(s), must be registered by the National Society of Professional Engineers as a Professional Engineer and who has a minimum of five (5) years of experience in the construction and supervision of construction of wastewater treatment systems and/or anaerobic digesters.
3. Prior experience administering design and construction projects of similar size and scope.
4. Financial and operational ability to perform project management services on the project within all established budget limits and time schedules.
5. Familiarity and/or experience with Waste Water Treatment Plants (WWTP) and/or Anaerobic Digesters (ADs).
 - a) Experience with agricultural AD systems is favored, but not required.
6. Experience facilitating offtake agreements for AD energy products.
7. The proposer shall be properly licensed and authorized to perform work in the State of Maryland.

5 Proposal Requirements & Instructions

5.1 Minimum Submission Requirements

The following provides an outline of the information required in your proposal:

1. Proposing Entity Profile
 - a) Provide your entity's name, address, and point of contact, including email and phone.
 - b) Provide a description of your entity's size and general departmental profile.
 - c) Provide evidence of your entity's financial capacity to obligate itself to a project of this scope.
 - d) How many years has your entity provided professional construction management services?
 - e) What other services does your firm presently provide in the field of wastewater treatment, anaerobic digestion, or nutrient recovery?
2. Professional Organization
 - a) List the project team which will service this project and provide an organizational chart of those individuals who will be involved in the project.
 - b) Describe the role and qualifications of each person proposed for this project and their

experience with this type of project.

3. Project Experience

- a) List your experience providing Construction Management services for similar projects in the Mid-Atlantic Region or in the United States at large.
- b) List five (5) project references including name, type, purpose, location, budget, adherence to project timeline and client contact information.
- c) List any experience with the integration of electric and gas utility interconnects with AD operations.
- d) List any direct experience with nutrient recovery from AD facilities.
- e) List any direct experience with the installation of specialized dewatering infrastructure.
- f) List any experience with the oversight of construction of automated product lines.
- g) List any experience with the oversight of solar or rooftop solar installations.
- h) Describe your familiarity with equipment vendors and suppliers of tanks, pumps, monitoring systems, and biogas and water filtration equipment for WWTP and AD systems.
- i) Describe your knowledge of and experience with applicable State of Maryland permit acquisition.

4. Construction Management Approach

- a) Define your ability to manage all phases of development of the proposed project, including conceptual design, acquisition of permits, oversight of detailed design, procurement of equipment and installers, oversight of construction and installation of infrastructure.
- b) How do you propose to manage the following?
 - i) Cost estimating and cost control
 - ii) Project scheduling
 - iii) Coordination of Project Team, manufacturers, vendors and contractors
 - iv) Procurement of bids for construction
 - v) Project supervision and management
 - vi) Communications with and between the Owner and other collaborators
 - vii) Unanticipated issues that arise during the project period
 - viii) Project safety, including general workplace safety and considerations for exposure to toxic environments during commissioning, testing and project close-out
- c) Define your ability to facilitate the Owner in the ADNR facility commissioning and performance and acceptance testing.

5. Work Load

- a) List your firm's and/or your project team's current construction management projects including type of project, location, size, and anticipated completion date.

6. Compensation Proposal

- a) Your entity's proposal should be based on the site layout, project budget, project schedule, schematic designs and expected permit requirements included with this RFP. It should include separate bids for Pre-Construction and Construction Phase CMA services based on the proposed project scope.
- b) Your Pre-Construction Phase proposal should include allowances for the following:
 - i) Planning & Scheduling
 - ii) Estimating
 - iii) Value Management

- iv) Quality Review
 - v) Preparing Contracts for Design Engineering & Construction
 - vi) Bid Procurement
 - vii) Project Manager and staff
 - viii) Tracking costs against budget
 - ix) Design meetings
 - x) Clerical Costs
- c) Your Construction Phase proposal should include allowances for:
- i) Project manager and staff
 - ii) Safety officer
 - iii) Construction document review
 - iv) Change order oversight
 - v) Budget oversight
 - vi) Construction meetings
 - vii) Project commissioning and close-out
 - viii) Clerical costs
 - ix) Miscellaneous staff expenses
 - x) Job trailer
- d) Your entity's proposal should **not** include the following (these items will be deemed reimbursable expenses or are included in the facility budget):
- i) Roadway upgrades/maintenance
 - ii) Trash dumpsters
 - iii) Dump permit and fees
 - iv) Temporary toilets
 - v) Temporary utilities (e.g., water, electric)
 - vi) Temporary heat
 - vii) Temporary fencing
 - viii) Temporary barricades
 - ix) On-site equipment
 - x) Project storage rental
 - xi) First-aid supplies
 - xii) Project signs
- e) Additionally, the following are to be paid directly by the Owner:
- i) Architecture and Engineering
 - ii) Special Testing
 - iii) Site Surveys
 - iv) Soil Explorations
 - v) Material Testing
 - vi) Permits for Construction

5.2 Instructions to Proposing Entities

1. Please provide all submissions with the following formatting:
 - a) Single-spaced text
 - b) Typed, 12-pt report font (e.g., Arial, Cambria, Times New Roman, etc.)
 - c) Titles and headings may exceed the 12-pt font size
 - d) 8-½" x 11" page size
 - e) ¾" margins on all sides

- f) Sequentially numbered pages
 - g) A Table of Contents
2. All submissions should include legible charts, figures, graphs, pictures and tables wherever practical to depict organizations, systems, layouts, implementation schedules, plans, etc.
 3. Please provide (by email) any questions or clarifications arising from this RFP to PFED's contacts (see Section 6) by Friday, October 23, 2020. PFED will address these points individually with each Proposing Entity in meetings to be scheduled at a time of mutual convenience between November 2-3.
 4. Proposing Entity proposals should be digitally signed in a legally verifiable format by a representative having the legal authority to uphold it.
 5. Proposing Entities may correct, modify or withdraw the original proposals on or before the due date. As with all proposals, questions and clarifications, corrections or modifications should be submitted by email to PFED's Contacts. Any late correction or modification to the submittal will not be accepted.
 6. All proposals should be submitted in PDF format.

5.3 Additional Terms

1. A proposer who wishes to withdraw a submittal must make a request in writing. Negligence upon the part of the Proposing Entity in preparing its proposal confers no right of withdrawal or modification after the stated due date and time.
2. Each Proposing Entity shall be presumed to have read and be thoroughly familiar with this RFP and all appended documents. Unfamiliarity with these documents shall in no way relieve any proposer from any obligation in respect to his/her submittal.
3. The Proposing Entity's proposed superintendents, managers, and staff may be changed only with the express prior written permission of PFED. PFED retains the right to approve or reject replacements.
4. It is understood that the Proposing Entity's submission to PFED to provide said services and products will remain valid for 90 days past the submission deadline. The successful Proposing Entity's submittal shall become a part of the contractual Agreement PFED and the Proposing Entity.
5. It is understood that the Proposing Entity has submitted the proposal in good faith and without collusion or fraud with any other individuals, firms, or corporations. Each Proposing Entity attests to this understanding by providing its legal signature as described in Section 5.2.
6. All proposals are to include a statement that the proposal is in accordance with this RFP and that the Proposing Entity has read and understands all sections and provisions herein. Exceptions, if any, are to be clearly stated.
7. Proposals which are incomplete, conditional or obscure, will be rejected. No award will be made to any Proposing Entity that cannot satisfy PFED that it has sufficient ability and resources to enable it to meet the requirements of this RFP. PFED's decision or judgment on these matters shall be final, conclusive and binding.
8. All costs involved in preparing the proposal will be borne by the Proposing Entity; PFED will not be liable for any costs associated with the creation or submission of the proposal.
9. All proposals will be opened privately and not be disclosed to the public or competing proposers until the evaluation process is completed.
10. Any proposal received after the due date and time stated in this RFP will be deemed non-responsive and shall not be opened. Unopened Qualification submittals will be returned to the

Proposing Entity.

11. PFED may cancel this RFP, in whole or in part, or may reject all proposals whenever such action is determined to be fiscally advantageous to, or is otherwise in the best interest of, PFED.
12. PFED may request that supplementary information be furnished to assure it that a Proposing Entity has the technical competence, the business and technical organization, and the financial resources adequate to successfully perform the necessary work.
13. Prior to a CMA gaining access to PFED proprietary information in the course of performing the services outlined herein, the CMA must agree to protect said information from unauthorized use or disclosure for as long as it remains proprietary, and refrain from using it for any purpose other than that for which it was furnished to the CMA. The CMA may be required to complete and abide by confidentiality and non-disclosure agreements.

6 Contacts

Please digitally submit your proposal (in PDF format) and any questions to:

*Mr. Andrew Moss
Technical Director
Planet Found Energy Development, LLC
amoss@pfedusa.com*

AND

*Mr. Neoklis (Nick) Kypreos
Chief Financial Officer
Planet Found Energy Development, LLC
nick@pfedusa.com*

7 Proposed Schedule:

RFP for Construction Manager Services released:	October 8, 2020
Questions and clarifications due to PFED:	October 23, 2020
PFED Meetings with Proposing Entities:	November 2-3, 2020
Proposals for CMA Services due:	5 PM EDT, November 11, 2020
Interviews of Proposing Entities:	November 19-20, 2020
Selection of Proposing Entity/CMA firm:	November 25, 2020
CMA firm start date:	December 7, 2020
Solicitation of Engineering Design-Build Team bids:	January 8, 2021
Selection of Engineering Design-Build Team:	February 5, 2020
Site Development and Construction start date:	August 2021
Substantial Completion of project:	June 2022
Facility Start-Up:	July 2022
Final Completion of project:	September 2022

8 Anticipated Permitting Requirements

8.1 Construction Permitting

1. Forest Conservation Plan (FCP) Compliance ([COMAR 08.19.01](#)) – A FCP outlines the specific strategies for retaining, protecting, and reforesting or afforesting areas on a site as part of the overall site plan. The proposed project would need to provide compliance with the FCP via afforestation, retention onsite or via mitigation bank or fee in lieu expenditure. The FCP should be initiated and generated by PFED or the facility engineering and construction contractor.
2. National Pollutant Discharge Elimination System (NPDES)/Notice of Intent (NOI) Compliance ([COMAR 26.08.04](#)) – NPDES permits delineate acceptable levels of a pollutant or pollutant parameters in a site's discharge. Since the proposed disturbance would be greater than one (1) acre, an NOI will need to be filed with MDE, and weekly inspections will be required once construction starts. This work should be completed by a permitting and/or compliance specialist familiar with the State of Maryland's NPDES process.
3. MDE Air Quality Permitting ([COMAR 26.11.02](#)) – MDE requires air quality permits for the installation of boilers and internal combustion generators with greater than 1 million BTU/hr output and 500 HP capacity, respectively. Permits to construct require that manufacturer specifications for all applicable units be submitted to MDE. The process should be initiated by the owner, the facility construction contractor, or a permitting and/or compliance specialist.
4. Erosion and Sediment Control Plan (ESCP) approval ([COMAR 26.17.01](#)) – “ESCPs are required for grading activity that disturbs 5,000 square feet or more of land area or 100 cubic yards or more of earth. As defined in Maryland regulations, grading is an activity that causes the disturbance of the earth. This includes but is not limited to any excavating, filling, stockpiling of earth materials, grubbing, or root mat or top soil disturbance. Maryland regulations specify what information is required on plans, including details of temporary and permanent stabilization.”⁹ The approval process would be initiated – and plans generated – by the facility construction contractor, but it will also be facilitated by the Maryland Department of the Environment since the preferred site is located on State property.
5. Stormwater Management Plan (SMP) approval ([COMAR 26.17.02](#)) – SMPs are generated in concert with ESCPs, and they are required by MDE to ensure that environmental site designs incorporate practices that are site appropriate, protect natural resources, conserve soil and natural drainage patterns, maintain groundwater recharge, and minimize runoff, amongst other factors, to the maximum extent practicable¹⁰. Similar to the ESCP, the SMP should be initiated and generated by PFED or the facility CMA and it will also be facilitated by MDE.
6. Groundwater Appropriation Permitting ([COMAR 26.17.06](#)) – Per MDE, water appropriation and use permits are required “to determine whether the amount of water requested is reasonable for the stated purpose, and to ensure that withdrawals do not have unreasonable impacts on the water resource or on neighboring users.” Groundwater withdrawal in excess of 10,000 gallons per day requires permitting, which would be based on engineered site plans and would be submitted by the facility CMA, or a permitting and/or compliance specialist.
7. MDE Wetlands and Waterway Permitting ([COMAR 26.23.02](#)) – The Maryland Wetland and Waterway Program “...protects Maryland wetlands and waterways from loss and degradation.” Based on preliminary site assessments and soil surveys, no wetlands have been identified on any of the proposed project parcels. However, if wetlands are found, a permit would need to be submitted to MDE following the generation of wetland impact drawings by the project’s civil and environmental engineers.

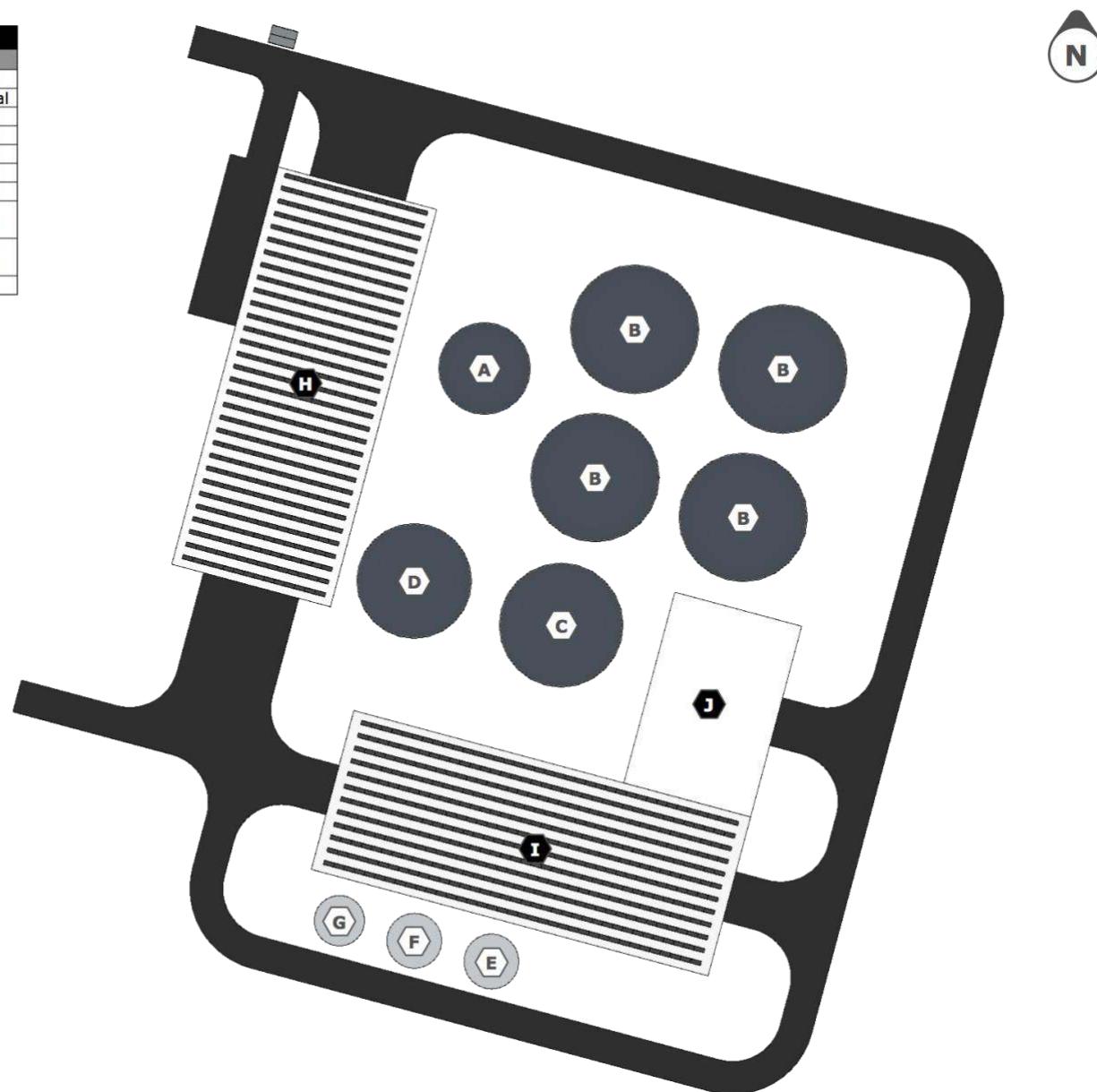
8.2 Permits to Operate

1. Alternative Use Permit ([COMAR 15.20.05.07](#)) – Alternative users of raw poultry litter from qualified poultry producing operations are required to enter into a contract with the Maryland Department of Agriculture in order to receive litter and participate in any eligible cost-share program. The facility owner/manager is also required to maintain three years of records documenting litter received, processing transformations, and the resulting product shipped to a terminal receiver (e.g., farmer, business, etc.).
2. Digestate Quality Compliance ([COMAR 15.18.03](#)) – Distributors of digestate are required to annually register each brand and grade of commercial fertilizers or each product name of soil conditioners. If sold under PFED's Element Soil® product line, this requirement could already be satisfied via the certifications provided by similar products at PFED's pilot facility in Pocomoke City, MD.
3. Standard Small Generator Interconnection Agreement ([COMAR 20.50.09](#)) – This process establishes technical and application requirements for a requesting small generator facility and the reviewing electric distribution company. An eligible small generating facility's interconnection equipment must be lab-certified and field-approved and comply with the general application and technical requirements of COMAR 20.50.09.06.
4. Renewable Energy Credit Generation and Trading as Renewable Energy Source Provider ([COMAR 20.61.01](#)) – An anaerobic digestion facility that produces electricity from a Tier 1 renewable source that would like to participate in Maryland's Renewable Portfolio Standard must apply for certification as a renewable energy source provider with the Maryland Public Service Commission. Facilities must contact [PJM Environmental Information Services](#) no later than 30 days after certification as a renewable energy facility to establish a Generation Attribute Tracking System account (COMAR 20.61.02.02).
5. Certificate of Public Convenience and Necessity Exemption ([COMAR 20.79.01](#)) – Although technically applicable to AD projects, a Certificate of Public Convenience and Necessity (CPCN) waiver is generally granted for facilities with less than or equal to:
 - a) 2 MWh total output capacity; or
 - b) 25 MWh total output capacity, where electricity will be sold wholesale under an interconnection, operation, and maintenance agreement with the local electric company and at least 10% of the rated capacity is used on site; or
 - c) 70 MWh total output capacity as in 2b, where all electricity is sold wholesale.
 At all forecasted facility scales, the proposed project would qualify under these exemptions.
6. Water and Sewerage Construction Permit ([COMAR 26.03.12](#)) – This permit is designed to ensure that water quality infrastructure projects meet certain engineering principles and comply with state design guidelines to protect Maryland's water quality and public health. It would likely be facilitated by UMES through the Town of Princess Anne, although an amendment to their existing water and sewer plan could potentially be required. The project's civil engineers would be tasked with securing this permit.
7. Refuse Disposal Permit ([COMAR 26.04.07](#)) – This permit regulates the handling and disposal of solid waste. In Maryland, AD systems have traditionally been required to apply for this permit as part of the State's Environmental Article in the solid waste code. Permitting can be avoided by one of two pathways:
 - a) If MDE determines that:
 - i) The digestate is returned to the marketplace in the form of a raw material or product;
 - ii) The quantity of non-digestible and non-recyclable solid waste handled at the

- facility remains at a de minimis (negligible) level; and
- iii) The facility does not cause a nuisance, pollution, or other threats to public health, safety, or comfort as required under COMAR 26.04.07.03.
- b) If the facility is constructed at and operated for private use at a school, apartment complex, industrial facility, hospital, commercial establishment, individual residence, farm, or similar location (COMAR 26.04.07.23(A)(2)).
8. Stormwater Discharge Permit (SDP) ([COMAR 26.08.04](#)) – This permit is intended to control stormwater from industrial activities and wastewater discharges from municipal and industrial facilities. AD facilities are often required to obtain discharge permits due to their classification as Chemical and Allied Products Manufacturing facilities, which results from their methane generating capacity. However, if all regulated industrial materials under this code are kept covered, a No Exposure Certification can be applied for in lieu of the SDP. If this certification is not granted, the following requirements must be met for permitting:
- a) Install and implement certain control measures that are documented in a Stormwater Pollution Prevention Plan;
- b) For operations categorized as Sector C-Chemicals and Allied Products Manufacturing, conduct quarterly benchmark monitoring and reporting, for at least a year, to assess the effectiveness of control measures;
- c) Conduct quarterly visual monitoring; and
- d) Complete annual Comprehensive Site Compliance Evaluation to track inspection findings, incidences of exposure, corrective actions taken, and maintenance of control measures needed.
9. MDE Air Quality Permitting ([COMAR 26.11.02](#)) – MDE also requires air quality permits for the operation of boilers and internal combustion generators with greater than 1 million BTU/hr output and 500 HP capacity, respectively. Permits to operate require the documentation and reporting of operational limits, work practices, monitoring, testing, recordkeeping, and reporting conditions.

9 Tentative Site Layout

TABLE OF STRUCTURES		
Label	Description	Size
A	Pretreatment Tank	350,000 gal
B	Digester	1,013,000 gal
C	Effluent Break Tank	790,000 gal
D	Water Storage Tank	550,000 gal
E	Chemical Tank #1	155,000 gal
F	Chemical Tank #2	155,000 gal
G	Chemical Tank #3	130,000 gal
H	Feed Intake & Storage, Offices, & Lab	25,000 sq ft
I	Dewatering & Production	25,000 sq ft
J	Product Storage	9,600 sq ft



10 Sources

1. Delmarva Poultry Industry, Inc. *Delmarva Chicken Production Facts 1957-2019*. <https://www.dpichicken.org/facts/docs/Delmarva-Chicken-Production-Facts-1957-2019.pdf> (2020).
2. Eric Lichtenberg. *Economic Impacts of Changes in Phosphorus Regulation*. http://www.chesapeake.org/stac/presentations/240_Economic%20Impacts%20of%20Phosphorus%20Regulation%20CBP%20STAC_Lichtenberg.pdf (2016).
3. Edmond (Biff) Burns - Burns Farm. Biff Burns Dissolved Air Flotation Interview. (2020).
4. Maryland Department of Agriculture. *Implementation Update: The Phosphorus Management Tool*. <https://mda.maryland.gov/Documents/PMT-Update-January-2020.pdf> (2020).
5. Joe Bartenfelder & Hans Schmidt. PMT & Manure Transport Update. (2017).
6. Nutrient Management Advisory Committee. *2017 Progress Report - Phosphorus Management Tool Transition Advisory Committee*. https://mda.maryland.gov/resource_conservation/counties/PMTAdvisoryCommittee%20Report_2017.pdf (2017).
7. Moss, A. Waste Material Processing System. (2019).
8. Sage Policy Group. *Somerset County Training, Tourism, & Transforming the Built Environment: Keys to a Better Economic Future*. (2020).
9. Maryland Department of the Environment. Fact Sheet: Stabilization of Disturbed Land during Construction Activities. (2020).
10. Maryland Department of the Environment. *Maryland Stormwater Management and Erosion & Sediment Control Guidelines for State and Federal Projects*. <https://mde.maryland.gov/programs/Water/StormwaterManagementProgram/Documents/SWM%20and%20ESC%20Guidelines%20for%20State%20and%20Federal%20Projects%20FEB%202015.pdf> (2015).