



April 12, 2023

Fiberight Global Holdings, LLC  
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Baltimore, MD 21227

Connecticut Department of Energy and Environmental Protection  
79 Elm Street  
Hartford, CT 06106-5127

*Via Email:* [DEEP.MMCAPlanning@ct.gov](mailto:DEEP.MMCAPlanning@ct.gov)

*RE: Request for Information issued by the Connecticut Department of Energy and Environmental Protection to solicit information on materials management infrastructure.*

Dear Ladies and Gentlemen;

Fiberight Global Holdings, LLC (<https://fiberight.com/>) ("Fiberight") is pleased to provide our response to the above referenced Request for Information ("RFI") issued by the Connecticut Department of Energy and Environmental Protection ("DEEP"). We have reviewed the RFI and have prepared our response hereafter.

Fiberight's key concepts have been in development since 2007, supported by over two decades of successful business history in the waste recycling industry, and a unique management and scientific team that has developed Fiberight's novel solution to convert trash headed for landfill or incineration disposal into products or valuable low carbon footprint energy. By applying a combination of expertise in the waste industry with specialty biotech knowledge, Fiberight has created a means to efficiently sort, pulp, process, digest and refine the abundant cellulosic content in organic waste materials and biogas.

What differentiates Fiberight from other approaches is that we have applied our practical materials handling expertise in the recycling and waste management industries to develop the concept into a commercially viable business. Three years ago, Fiberight first began to prove that its enhanced organic separation technology could be industrialized for transportation grade fuels and biogas, and we were the first company in the U.S. to build a fully integrated waste processing demonstration plant, which facility now has over 10,000 hours of operating experience. Fiberight currently maintains a number of waste processing and hydrolysis patents granted in the United States, Europe, Australia, and India. The patented process:

- Extracts recyclable material from MSW that are too difficult to be source-separated;
- Facilitates the advanced recycling of plastics vs. current industry methods;
- Facilitates the creation of biogas from food waste;
- Facilitates the creation of new paper products from recycled pulp;
- Facilitates the conversion of pulp to advanced, bio-chemicals;
- Eliminates the need for incinerators and minimizes the use of landfills; and,
- Drastically reduces greenhouse gas emissions – including all methane.



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As a result of this experience, Fiberight was awarded a 15-year contract by the Maine Municipal Review Committee (“MRC”) to construct and operate Coastal Resources of Maine LLC a commercial scale advanced waste processing facility in Hampden, ME (“Maine Plant”). This 180,000 ton per year waste processing facility was privately financed and was placed into commercial operations in November 2019 after satisfactorily passing its operational performance tests. It operated for six months achieving a waste diversion rate of sixty percent (60%). Due in large part to the pandemic in 2020, the Maine Plant was unable to secure working capital and was shut down. Fiberight is now aggressively working with the MRC, the current owner of the Maine Plant, to return the facility to full commercial operations. Importantly, Fiberight’s experience at the Maine Plant has enabled further refinements and improvements to the waste processing technology. A Fiberight affiliate is currently establishing a new 50,000 ton per year facility in South Wales that will use innovative resource recovery techniques to increase the capture of materials from waste for the production of market-ready recycled materials. This is a multi-year effort and it is our expectation that the South Wales facility will process 100,000 tons of waste by 2026.

We are confident that our vision aligns itself with the goals and objectives of the RFI and provides a long-term sustainable solution that will deliver both economic and environmental benefits. A key element of our response relates to our plan to construct an advanced waste processing facility, similar to our project in Maine, on either state or municipally owned land. Such a project could provide tax revenues, host fees, and other environmental services to host community during the duration of an awarded contract. Fiberight will seek DEEP’s support to permit this facility.

Our response focuses on processing municipal solid waste (“MSW”), however we will evaluate providing services to process yard waste and municipal sewage sludge subject to permit and site assignment constraints.

On behalf of Fiberight, we thank you for your consideration and look forward to working with DEEP to improve diversion of municipal solid waste for recycling and to regain self-sufficiency in managing municipal solid waste disposal within Connecticut’s borders. For more information about Fiberight we encourage you to visit [www.fiberight.com](http://www.fiberight.com).

Sincerely,

A handwritten signature in cursive script that reads "Steven W. Davey".

Steven W. Davey  
Chief Executive Officer



Response to:



**Connecticut**  
Department of Energy &  
Environmental Protection

Request for Information

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## Site Characteristics and Facility Details

### 1. *What type of solid waste processing operation are you interested in developing in Connecticut?*

Fiberight has the capability to develop and commercialize a Connecticut compliant waste diversion solution that will provide the State and participating municipalities with the ability to move towards a zero-waste environment and achieve the goals and objectives as outlined in this RFI. Our vision will create sustainable efficiencies from the aggregation of waste and recycling services and consolidation of waste streams (one-bin solution) at the point of collection. We envision a solution that “rethinks” waste as a resource that creates a greener community, creates jobs in an emerging industry and provides Connecticut with a long-term environmentally and financially viable solution to traditional landfilling and out-of-state disposal. Fiberight possesses the requisite experience and capabilities to perform on this ambitious project having spent years developing its robust technology platform and then financing and constructing a commercial scale facility in Hampden, Maine and in Swansea, Wales, United Kingdom.

Fiberight’s technology platform generates significantly more value per ton and recovers more from municipal solid waste (“MSW”) in the form of recyclables and/or beneficially re-used products than either a dirty material recovery facility (“MRF”) or processes that concentrate on producing resource derived fuel (“RDF”) or compost with their negative carbon impacts. These unparalleled recovery rates are made possible by a technology platform that focuses on:

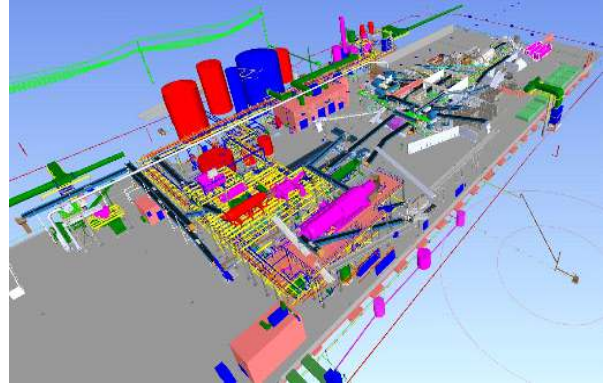
- Separating mixed MSW into processible fractions;
- Further dividing and then aggregating certain fractions into two dimensional, three dimensional and fine materials;
- Processing each separated fraction in the most efficient manner to manufacture practical products for sale into the market or create drop-in feed stock for other product manufacturers; and,
- Incorporating automation for efficient recovery of materials.

Fiberight’s technology platform offers the best pathway towards carbon reduction, closed-loop economic opportunity, and sound environmental practice for the processing of municipal solid wastes. Furthermore, the process flexibility afforded by Fiberight’s technology platform creates the potential for revenue generation by upgrading elements of waste into paper-derived pulp for either papermaking or into a hydrolysis pathway for creating renewable biogas, high purity upgraded plastics and/or plastics depolymerization to recreate plastic again, and valuable biogas production from organic wastes. Collectively these processes provide the opportunity for tax credits and gain-sharing that may provide further reduction in disposal costs.

If selected for further discussion, Fiberight will immediately commence a feasibility study and due diligence process to identify a location to design, permit, construct and operate a low-risk resource recovery facility (Maine Plant pictured on the next page) capable of accepting and processing 600 to 1,200 tons per day of MSW and single stream collected recyclables. These efforts will fully inform a project schedule, trigger project financing, and evaluate additional options such as yard waste and biosolids processing. Fiberight brings to this potential project an experienced team, sound engineering, construction capability and practical knowledge of MSW processing.



External View



Internal View

Fiberight’s solution is to commercialize a facility where MSW will initially be processed to remove bulky items and fines, then further processed using robust and proven sorting technologies that are designed for the efficient fractionation of organic and non-organic wastes. A novel feature of this facility will be the ability to negative-sort multiple streams of organic waste, thereby limiting human touches on the putrescible fraction. In addition, Fiberight will construct rigid and flexible plastic wash plants and an adjacent high-rate anaerobic digester based on its demonstrated technology platform to produce clean compressed biomethane that may be used in regional hauler collection fleets and for other Connecticut and/or national transportation needs or pumped into the existing gas grid.

In developing any Connecticut waste facility, Fiberight will adhere to the following philosophy:

Fiberight Philosophy	
Primary Objective	To provide a long-term alternative for receiving up to 100% of the waste currently disposed within a capture basin that is both economically and environmentally viable and in conformity with Connecticut’s waste management hierarchy.
2 <sup>nd</sup> Objective	To construct a regional waste processing facility capable of handling 180,000 to 360,000 tons per year of MSW that will provide jobs, tax base, and host fees.
3 <sup>rd</sup> Objective	To integrate a <b>One-Bin</b> solution into local collection infrastructure for the collection of residential MSW and recyclables – which reduces the financial and environmental impact of the multiple waste collection trucks on the road to collect waste and recyclates.
4 <sup>th</sup> Objective	To evaluate the potential for co-processing of yard waste and biosolids generated by the waste customers in a manner that is consistent with final site assignment and relevant regulations.
5 <sup>th</sup> Objective	To construct the waste processing facility on an identified site, provided however that a feasibility study demonstrates a clear pathway to permit acceptance, neighborhood support, satisfactory road and utility infrastructure, and limited construction constraints.

In developing any Connecticut waste facility, Fiberight will propose the following business relationship:

Business Relationship	
Project Ownership	Fiberight will self-finance the facility to be preferably located on a municipally-owned site. The project will pay the municipality a base rent for the site, which rent will take the form of both actual cash, reduced tip fees, rebates, and host fees for third-party wastes.
Flow Control	Should the facility be located on a publicly owned site, such public/private partnership could form the basis for enactment of flow control ordinances directing wastes collected in the municipal boundaries to the facility.
Site	Site will provide reasonable highway and possibly rail access for waste and product deliveries, and the project will not be liable for any existing environmental issues. Location close to an existing gas pipeline (for exporting biogas generated onsite) would be a plus.
Contract Term	Waste agreements with municipal customers will have an initial term of 15-years with two 5-year extensions.
Other Wastes	The proposed facility will incorporate anaerobic digestion (“AD”) and wastewater treatment systems. Fiberight will, subject to permit and public approval, seek additional special wastes for the facility such as yard waste and biosolids for processing.
Host Fees	A host fee, to be determined, for third-party wastes brought to the facility depending on site selection and ultimate development cost.
City/Town Support	Site provision, site assignment support, community support, presence at certain DEEP meetings and public hearings, enactment of flow control ordinances.
City/Town Obligations	Maintaining in place all relevant ordinances required for the facility’s operation. Guarantee that “all city or town collected” waste will be sent to the facility. No changes in waste collection practices or waste ownership during the term of the contract.
Other Benefits	Availability of stable priced compressed natural gas (“CNG”) that may be used for city or town transportation uses such as school buses and waste collection vehicles. Approximately 65-80 well-paid local jobs with full benefits. Local infrastructure that will allow the city or town to meet or exceed Connecticut waste diversion and recycling mandates, including food waste and other organics recovery. Both incineration and landfilling have negative carbon impacts compared to the Fiberight technology. Fiberight’s circular reuse and conversion of fiber and plastic back into their product streams or into durable products provides a pathway for carbon sequestration.

- Please describe in detail the technology proposed, and potential capacity and throughput in tons per day and tons per year. Please describe how your project is consistent with the State’s solid waste hierarchy and the state’s goal of 60 percent diversion from landfill and combustion.*

### **Technology Background**

The patented Fiberight process is based on European mechanical biological treatment (“MBT”) plants that separate and recover recyclables from organic material. In 2017, there were 570 active MBT plants in Europe with a treatment capacity of 55 million tons, with another 120 facilities with an estimated capacity of almost 10 million annual tons to be commissioned between 2017 and 2025.<sup>1</sup>

<sup>1</sup> Source: Ecoprog, “The Market for Mechanical Biological Waste Treatment in Europe”, 2<sup>nd</sup> Edition, May 2017.



MBT originated in Germany in the late 1990's and has evolved through three generations that now include biogas production through AD. The third generation MBT plants built (by Fiberight, Veolia and Renescience for example) can be designed to include a hydrolysis step that both dramatically improves organic paper-derived pulp conversion and improves AD biogas output.

## **Fiberight Processes and Technology**

### **MSW Processing Technology**

The proposed Fiberight Connecticut facility will employ a process that is based upon MBT technology to process and separate delivered MSW. Similar to other MBT plants, the Facility will process mixed household, commercial and industrial wastes through a two-staged process. The first stage is mechanical, comprised of recycling equipment to process unsorted MSW to remove bulky materials, fines, textiles, films, mixed plastics and metals for eventual sale or disposal. In the second stage, pulping and washing systems screen and separate residuals from the first stage to create the following homogenous outputs:

- Clean pulp for sale into the paper markets or subsequent processing with the enzymatic hydrolysis of the paper fiber to liquid sugars then to be anaerobically processed into natural gas;
- High organic liquor to generate bio-methane through anaerobic digestion;
- Mixed plastics that are separated and extruded into an upgraded plastics for sale to local markets or subsequent processing and recovery for sale as a recycled product;
- Metals are extracted from the waste and separated into ferrous and non-ferrous product streams and shipped offsite for further processing; and,
- Residues that are disposed of at lower cost than incoming tipping fee rates.

The key unit operations employed by the facility include:

- Acceptable waste evaluation and sequestration of wastes at the tipping floor to identify and reject unacceptable waste;
- Manual and automated mechanical sorting through the MRF, which is an integrated waste processing system, to recover dry recyclable materials;
- Pulping of mixed residues after mechanical sorting to separate organic materials from inorganic materials without the need for human contact;
- Washing and screening of pulped organic material to render the cellulosic fraction suitable for reuse in the paper market or to be hydrolyzed and used in the production of biogas;
- Washing and screening of fine material (material less than 2 inches) to recover soluble organic material as a feed to anaerobic digestion, and to render heavy materials such as glass and grit suitable for reduced cost disposal;
- Segregation and/or washing of rigid and flexible plastics to create bailed commodities to be used in the durable plastics markets; and,
- Anaerobic digestion.

### **Fiberight Process Differentiation**

Fiberight's technology is differentiated from other advanced waste processing, waste-to-energy, or disposal options by the fact that it is capable of both recovering material fractions, and then refining many into higher value products. MSW is first sorted for recovery of traditional recyclables and removal of residues, then split into three distinct fractions for further upgrading.

The front-end of the proposed project incorporates recycling equipment (including the capacity to process source separated "single stream" recyclables) provided by CP Manufacturing ("CP"). CP has built numerous plants



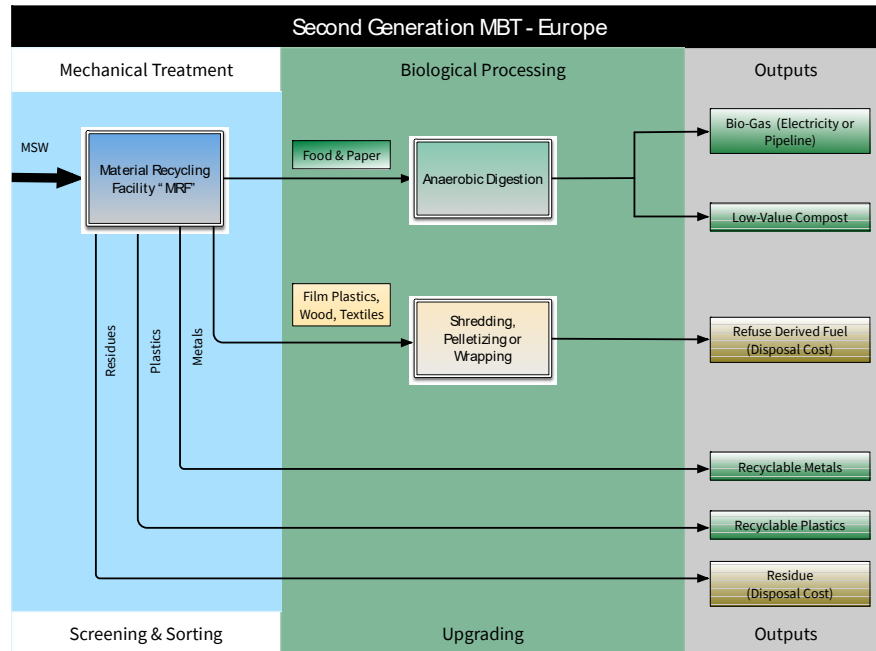
worldwide that successfully process mixed residential waste that are in continuous operation. An example of a successful CP mixed waste plant in the United States is in Sunnyvale California. This plant processes over 750 tons per day of MSW and has been in operation since 2007.



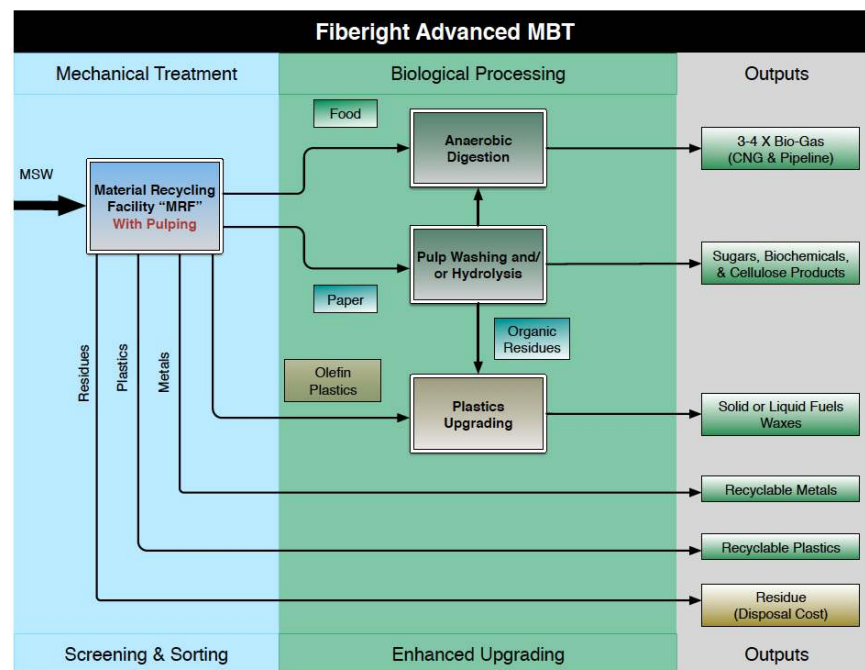
CP MRF at Fiberight's Hampden Maine Facility

The Fiberight project does not need to run in an integrated manner to continuously accept waste. If for some reason one of the “downstream” processes, such as AD, fails, it can be isolated from the CP sorting system. Non-recovered waste would then be by-passed to landfill under long-term contract until the system in question is repaired and brought back online. CP's Sunnyvale project experiences over 90% availability.

Two process flow diagrams are shown on the following page; one that illustrates a typical 2<sup>nd</sup> generation MBT plant, and another that illustrates Fiberight's addition of paper pulp washing that enables the sale of paper pulp and/or the use of paper for hydrolysis purposes.

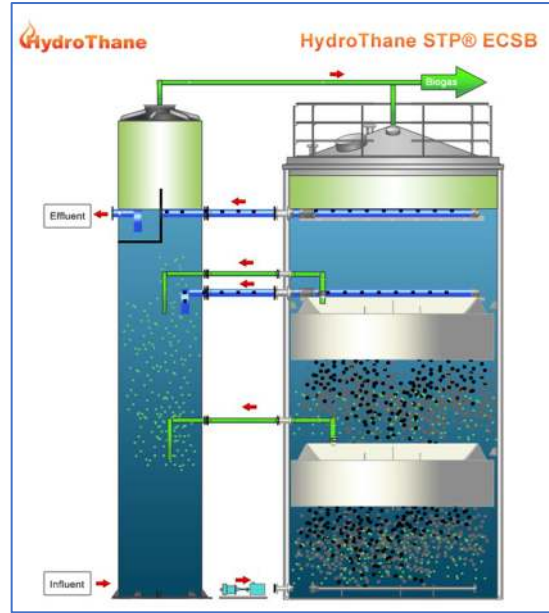


Second generation MBT economics are challenged by high costs of disposal for the refuse derived fuel (“RDF”) outputs, low organics conversion, and limited, low-value markets for compost. While a robust operating model, MBT in Europe relies on high tip fees for profitability. Under this model, the land application of anaerobic digester solids may be limited, due to the concern over perfluoroalkyl or polyfluoroalkyl substances (“PFAS”) contamination of ground water, a growing consideration in the United States, but not applicable to the Fiberight process.



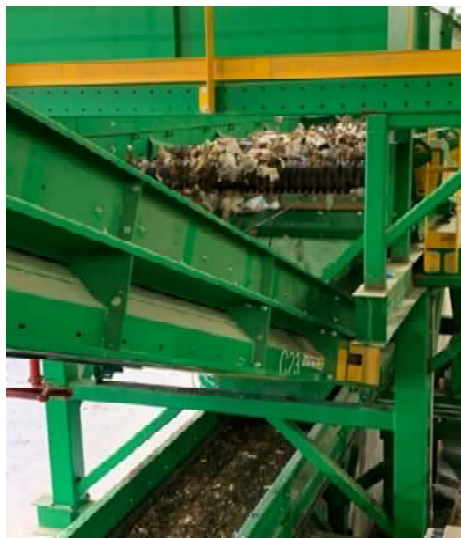
Fiberight’s 3<sup>rd</sup> generation MBT process is further differentiated by the inclusion of paper-derived pulp upgrading which both enables potential production of high-value pulp and further enables the use of high-rate, low-solids anaerobic digestion. Low-solids anaerobic digestion is a proven industrial practice, however it is unsuitable for use with insoluble waste materials such as paper packaging and compostable food waste. These materials do not readily break down using the alternative high-solids approach, resulting in poor biogas output and unconverted residues that are difficult to disposition as compost, or as described in Europe “Compost Like Organics” (“CLO”).

More importantly, by removing soluble food waste, other organics and further screening pulped paper, Fiberight has been able to produce high quality paper pulp for use in the manufacture of paperboard and packaging. This capability is both unique to Fiberight and comes at a time where traditional markets for recycled paper offer low and inconsistent pricing.



## Fiberight Processing of Food/Paper/Plastic Waste Fractions

### Food Waste and Other Organic Materials



Screening and Separation of Fine Material

The food waste and other organic materials in MSW is made up of both soluble and insoluble materials. Examples of soluble food waste include sauces and liquids, insoluble food examples include meats and vegetables. These latter foods may be solubilized using mechanical methods and bio-catalysis, with biogas or biochemicals being extracted from the liquid slurry.

Fiberight has studied and demonstrated the capacity to recover organic materials from these different types of foods. The Maine Plant was designed to enable the recovery of each by first mechanically separating fines (which contain most of the soluble organics found in waste), and then isolating non-soluble organics in a three-dimensional stream.

Once screened, this fines material is transferred to a proprietary fines processing system that effectively recovers soluble organics and small paper fibers from inert materials such as glass and rocks. Soluble organics are then pumped to the facility’s anaerobic digestion system to create biogas for process use.

Insoluble organics may be automatically removed from a discrete 3-dimensional fraction of waste, and then solubilized through mechanical and biochemical methods to create a soluble slurry. This slurry may then be used to generate additional biogas, or in the future potentially as a feedstock for higher-value biochemicals.

## Pulped Paper



Feed to Fiberight Pulper

Paper materials are fractionated and recovered by Fiberight’s process first by separation from mixed MSW as a two-dimensional fraction, and second, by way of a proprietary pulping and paper washing process.

Paper materials comprise between 20% to 30% of residential MSW based upon Fiberight’s operating experience. It takes the form of; non-recycled paper; packaging materials; food contaminated paper (pizza boxes etc.); diapers; and, paper backing. However, this material is difficult to simply sort and sell as a recyclable bale, particularly in current markets for recovered paper. In addition, it is difficult to remove plastic contamination.



Clean Paper After Pulping and Washing

Fiberight has solved these problems by developing a pulping methodology and process that effectively renders mixed paper into a homogenous paper pulp. This pulp is then washed and further screened so as to create a high-quality product (pictured nearby) that may be used in the manufacture of paperboard or hydrolyzed into soluble sugars akin to insoluble food waste.

By doing so, Fiberight has developed a product that is less exposed to market volatility than baled paper, creates higher value, and enjoys market option flexibility.

## Plastics



Mixed Plastics Recovered from MSW

Plastics are fractionated and recovered by Fiberight’s process by separation into two-dimensional (film plastics) and three-dimensional (containers) fractions. From this separation the process utilizes automated sorting systems to recognize plastics by polymer, and then eject them into discrete products for recovery. A key differentiator of Fiberight’s process is its ability to automatically process film plastic at rates up to several tons per hour. Plastics are then either baled for sale as recyclable grades, (PET, HDPE and PP), or washed and agglomerated for use in the plastic durable market (i.e. synthetic wood and other products) or compounded and extruded. The extrudate and compounded pellets are in demand from brand owners trying to meet their sustainable goals.

Plastics that are not recovered by the automatic sorting systems may find their way into the pulper feed, however because they do not pulp, they may be recovered downstream of the pulper by using density separation methods.

By processing this difficult to recover plastics, Fiberight is able to concentrate olefin plastics (polyethylene’s and polypropylene’s) which, in addition to being used for agglomerate used in the production of synthetic wood ideal for wet environments, provide an ideal feedstock into higher-value products such as pyrolysis oil and pellets for use in the



Baled Shredded Plastics



manufacture of new plastic products. Fiberight is currently incorporating these technologies and processes into its Swansea, UK facility.

### **Process Outputs**

The Fiberight technology platform, as demonstrated at commercial scale in the Maine Plant, outputs the following products:

#### Recyclables:

- ◇ Paper;
  - OCC - Grade 11
  - Mixed Paper – Grade 1
- ◇ Metals;
  - Aluminum UBC
  - Other aluminum containers
  - Mixed ferrous metals
  - Ferrous steel cans
- ◇ Plastics;
  - PET #1
  - HDPE #2
  - PP #5
  - Mixed Film Plastics.

#### Refined Products:

- ◇ Paper Pulp;
- ◇ Plastics olefin agglomerate;
- ◇ Biogas (from food waste and other organics); and,
- ◇ Aggregates.

#### Residues:

- ◇ Non-recoverable inert mixed waste [landfilled];
- ◇ Alternative daily cover (“ADC”), at a reduced disposal cost; and,
- ◇ Sludge from fines processing [landfilled].

#### Other:

- ◇ Waste water is processed on site – some water is purged to sewer;
- ◇ Odors are controlled through a wet scrubbing system with negative air pressure in process building;
- ◇ No electrical interconnection is required; and,
- ◇ Additional details regarding management of yard waste and biosolids will be provided in bid documents if required to be included in final bid.

### **Scalability and Enhancements**

A unique feature of the Fiberight technology is the ability to size, or scale, the waste processing plant to the amount of available waste. Scalability enables a Fiberight plant to be sized and designed in accordance with the amount of MSW in the plant’s catchment area. Effectively the throughput of the base waste processing train, 180,000 tons per year, can be increased or decreased by adding or removing additional processing technology. Fiberight plants can be developed to process waste volumes as small as 150,000 tons per year to 450,000 tons per year.

Additional Fiberight and third-party technologies can be incorporated, or “bolted on”, into Fiberight’s waste plants. These technologies leverage the underlying Fiberight process to further refine, process, or recover materials

to generate additional uplift in product value and revenue. Such revenues may ultimately be used to reduce tip fees to those municipalities sending waste to the plant for processing. These multiple technologies and bolt-on strategies include those highlighted in the table below.

Bolt-on Upgrade	Description	Comment
Biogas	Food and other organics converted into biogas	Biogas consumed as vehicle fuel benefits from additional revenue streams - (i) federal renewable identification number (“RINs”) and (ii) state low carbon fuel standard (“LCFS”)
Pulp Hydrolysis	Paper pulp further processed into biogas	Biogas consumed as vehicle fuel benefits from additional revenue streams - (i) federal renewable identification number (“RINs”) and (ii) state low carbon fuel standard (“LCFS”)
	Paper pulp hydrolyzed into sugars and further processed into other advanced chemicals	Fiberight’s patented hydrolysis process can convert the pulp into an industrial sugar
Film Upgrade	Extracting and processing post-consumer film into Low Density Polyethylene (“LDPE”) pellets	LDPE pellets can be used for many applications including automotive, flexible packaging, compounding, and medical applications
Pyrolysis	Low-grade plastics converted into constituent raw materials – oils and unconverted solids (carbon black or char)	The plastics thermally broken down via pyrolysis can be used as fuel or to create more plastic products

### Waste Hierarchy and State Goals

The Fiberight technology and process is fully supportive of Connecticut’s waste hierarchy and goals. As described herein, the Fiberight process extracts (i) recyclables from the waste stream, potentially enhancing waste customers recycling rates, and, (ii) food and organic materials in the MSW to generate biogas. Importantly, the Fiberight process only landfills residual material that has no value or commercial use. In short, the Fiberight process aligns with Connecticut’s integrated waste management hierarchy that emphasizes source reduction, recycling, composting, and energy recovery from solid waste, while relying on landfill disposal and incineration as a last resort.

### Commercial Reference Projects

#### A - Maine

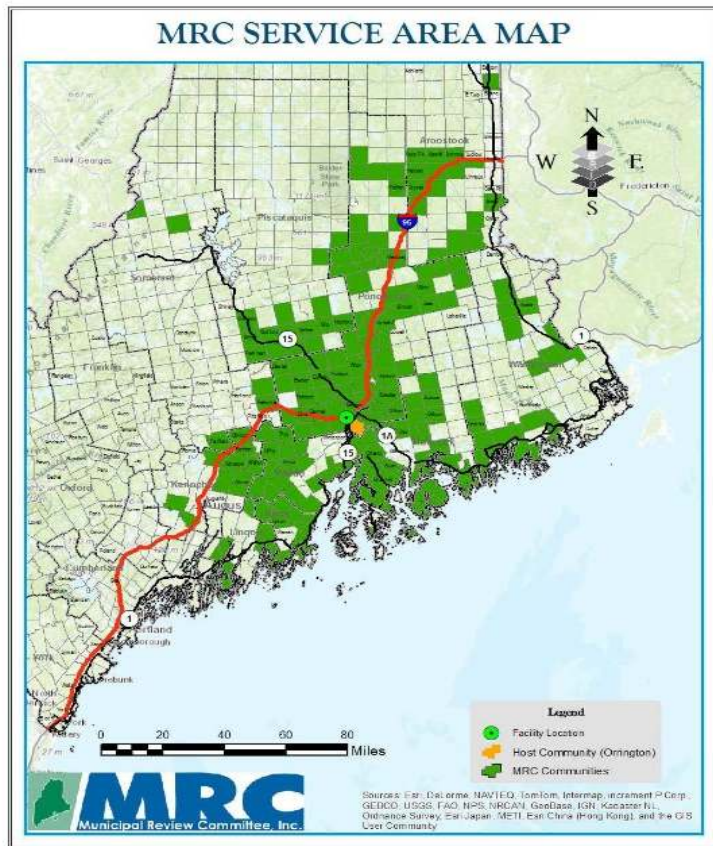
Fiberight has successfully developed and commercialized its technology at the Coastal Resources of Maine, LLC, a limited liability project corporation formed for the development, construction, and operations of a 180,000 tons per year MSW processing facility (the “Maine Plant”). The Maine Plant was constructed for approximately \$80M in 2019. The Maine Plant was financed privately with a combination of debt and tax-exempt bonds. There are no guarantees or recourse to any participating community other than an obligation to deliver waste.

The Maine Plant and the Municipal Review Committee (the “MRC”), entered into a site lease for the leasing of the project’s site as well as a waste supply agreement that provides approximately 106,000 tons of waste to the facility annually, replacing the Penobscot Energy Recovery Company LP (“PERC”) as the MRC’s waste disposal solution.

The Maine Plant utilizes robust equipment for the reliable and cost-effective treatment, processing and monetization of delivered MSW into recyclable materials, biogas, and paper. Reliable markets, many of them local, have been established for the Project’s off-take materials.

The Maine Plant executed waste agreements with 83 local municipal entities that represent 115 communities (the “Joinder Agreements”) that account for more than 60% of the plant’s expected waste supply and generate more than \$127 million in tip fees over their initial 15-year term. The waste supply agreements are well structured, provide exclusive access to all generated MSW within each municipality, and obligate the municipal entities (all with direct or indirect taxing authority) to deliver minimum quantities of MSW or pay financial penalties, establishing a durable level of municipal guaranteed revenues. The project’s service area is shown on the nearby table (communities shaded in dark green).

The general contractor, Bancroft, led the construction effort under a guaranteed maximum price construction agreement that guarantees the integration of the plant’s major systems/components, and contains market based liquidated damages. All construction parties were bonded with fixed priced, market-based performance warranties and guarantees on major technology and equipment procurement contracts. Commissioning of the project commenced in April 2019 and the plant passed its operational performance test in November 2019 and demonstrated the ability to operate at design capacity in excess of 40 TPH of MSW (for additional detail on the timeline of the Maine Plant please see Exhibit I).



The Maine Plant sells recyclable materials (plastics and metals) into well-established commodity markets with deep, demonstrated and liquid buyer bases, and also has established relationships into markets for liquid and solid fuels. Further, and uniquely to Fiberight’s technology and process, paper may be sold as a pulp substitute for papermaking as a result of multiple years of production, experience, and corresponding data. Paper pulp produced at the project is anticipated to be sold to local paper mills for linerboard production, or as a default into local energy markets as an approved biomass feedstock.

The Maine Plant was structured and financed under a disciplined approach that used a combination of equity and bond debt that did not confer any risk or obligation on the sponsor municipalities other than waste supply commitments. Further, the MRC communities hold certain rights that ensure their long-term access to the facility.

The Project secured permits for solid waste, air emissions, land use, stormwater management, Natural Resources Protection Act, Army Corp of Engineers, site plan and use.

The Maine Plant was placed into commercial operations in November 2019. During its operation, the Maine Plant produced commercially salable recyclable products that were sold to third-parties at prevailing market prices. The Maine Plant also demonstrated a diversion rate of sixty percent (60%), on a mass basis, of incoming waste.



## **B - Swansea, UK**

Fiberight is developing a commercial-scale demonstration facility in Swansea Wales UK and it is ramping up its processing post-consumer plastic packaging from mixed waste streams, such as reject material from Material Recovery Facilities (MRFs) and has created a new supply of recycled plastics to be used in the economy. The Swansea facility will use feedstock from local MRFs, initially contaminated MRF films and contaminated rigid plastics, before moving up to processing MRF reject materials.

The capacity of the first phase of this facility will be up to 60,000 tons per year. A second phase is planned to expand the capacity to 120,000 tons per annum, creating a total of 80 jobs. This film rich feedstock will be washed and agglomerated ready for use in the durable plastics market. The rigid plastics and metals are being sold into the traditional recycled plastic and metal markets. The fiber from this process is being sold as a feedstock into paper process.

The site contains a demonstration facility for the conversion of the cellulose contained in the pulp to industrial sugars using Fiberight's patented Enzyme hydrolysis. As part of the planned expansion, a full commercial hydrolysis plant will be built with a capacity of 8,000 to 10,000 tons per annum. This sugar platform will provide material to Fiberight's partners for the production of sugar based resins and lactic acid..

## **Conclusion**

Fiberight possesses unique, proprietary intellectual property ("IP")(Please see Exhibit II for additional detail on Fiberight's IP estate). Fiberight IP includes a number of waste processing and hydrolysis patents granted in the United States, the UK, the EU, Australia, and India. The patented process:

- Extracts recyclable material from MSW that should have been source-separated;
- Facilitates the advanced recycling of plastics vs. current industry methods;
- Facilitates the creation of biogas from food waste and other organics contained in the waste stream;
- Facilitates the creation of new paper products from recycled pulp;
- Facilitates the conversion of pulp to advanced, bio-chemicals;
- Eliminates the need for incinerators and minimizes the use of landfills; and,
- Drastically reduces greenhouse gas emissions – including all methane.

This Fiberight IP will be incorporated into any proposed Connecticut project and its application provides the opportunity for significant waste recovery and recycling potential that may be considered the "3<sup>rd</sup> Generation" of MBT; whereby robust pulping systems are employed to both create a clean fraction of paper from mixed waste, as well as clean rigid and film plastics that may be easily recovered using well proven, known recycling methods and machinery.

Fiberight's technology platform has the capability to generate significantly more value per ton and recover more from MSW into recyclables or beneficially re-used products than either dirty MRF's or processes that concentrate on producing refuse derived fuel (RDF) or compost.

### *3. What kinds of site characteristics are needed for your operation?*

#### *a. Acreage needs*

As described under Question 2, Fiberight technology may be sized, or scaled, reflective of the amount of available waste. This scalability feature enables a Fiberight plant to be sized and designed in accordance with the amount of MSW in the plant's catchment area. Subject to the final throughput capacity and plant configuration to deliver the required plant outputs, as well as local building code requirements (setbacks, etc.) and site access requirements, a facility capable of processing 150,00 to 180,00 TPY MSW would require approximately five acres. The Maine Plant was developed on a greenfield parcel that was approximately five acres.

- b. *Utility connection availability needs and facility usage requirements including, power, water, sewer, and gas*

The facility will require access to public water and sewer, gas and electricity. Access to a gas pipeline is a plus as the digester gas will be a valuable product of the facility due to its renewable attributes.

- c. *Access needs including transportation modes and proximity requirements (road, rail, port, etc.)*

It is anticipated that MSW will arrive on site by either packer truck or transfer trailer for unloading on to the facility tip floor. No special accommodation is required for MSW delivery.

#### 4. *What are the input and output requirements to make development feasible?*

- a. *Inputs*

- i. *What type of feedstock is required for your facility?*

The Fiberight process utilizes trash or garbage typically generated by homes, schools, hospitals, and businesses consisting of everyday items used and then thrown away, such as product packaging, bottles, food scraps, and newspapers (“Acceptable Waste”). The Fiberight process seeks to exclude those items that are not appropriate for processing to include appliances, paint, grass clippings, furniture, clothing, textiles, batteries, and hazardous waste (“Unacceptable Waste”). This Unacceptable Waste will be segregated at the plant, reloaded into the waste delivery vehicle and returned to the customer or disposed in a proper manner on behalf of the customer.

- ii. *Are there any specific characteristics needed to make the feedstock viable or processing limitations (e.g., food scraps must be source separated)?*

The Fiberight process can accept and process all Acceptable Waste generated by its waste customers and delivered to the plant. Given the robust nature of the Fiberight process, there are no processing limitations to Fiberight’s ability to accept and process Acceptable Waste.

- iii. *What are the tonnage/volume needs to make your facility viable? Provide a range or a minimum if applicable.*

A unique feature of the Fiberight technology is the ability to size, or scale, the waste processing plant to the amount of available waste. Scalability enables a Fiberight plant to be sized and designed in accordance with the amount of MSW in the plant’s catchment area. Fiberight has the ability to design plants capable of processing waste volumes as small as 150,000 tons per year to as large as 450,000 tons per year.

- iv. *Can you provide tip fee estimates?*

A final tip fee can only be established and agreed once the entire commercial and financial aspects of a waste processing facility are known in detail. However, Fiberight expects to offers a material reduction to the waste disposal costs of participating communities and municipalities. Fiberight understands that Connecticut municipalities now pay between one hundred and ten dollars (\$110) per ton and one hundred and thirty dollars (\$130) per ton in tipping fees. Assuming that Fiberight is able to commercialize a waste processing facility as described herein, Fiberight believes that it will be able to offer disposal services to waste customers at a contractual tip fee at or below this price range, assuming annual escalation according to changes to the Consumer Price Index (“CPI”) over a period of fifteen years.

While Fiberight expects to offer waste customers a very compelling tip fee relative to current market prices, the Fiberight process generates revenues from the sale of (i) commodities separated from the waste streams and (ii)

manufactured products (paper, engineered fuel and biogas). These recyclable commodities and manufactured products are sold either at prevailing market prices or under contract. In favorable markets, Fiberight expects to utilize a portion of these additional revenues to offer waste customers a lower disposal cost through tip fee rebates and/or revenue sharing arrangements.

c. *Outputs*

- i. *What are the outputs of your process (e.g., electricity, renewable natural gas, compost, baled material, etc.)?*

The Fiberight process uses various manual and automated processes to separate recyclable materials, including rigid plastics, cardboard, ferrous and non-ferrous (i.e., aluminum) metal from the waste stream. Please see Question 2, Processed Outputs on page 10 for processed outputs.

- ii. *What minimum revenues or revenue guarantees do you need for these outputs?*

Fiberight does not require any revenue guarantees or financial support from its waste customers, the host community, or the State of Connecticut for the sale of the outputs and products generated from the waste. The risk of the sale of these outputs and generated products to third-parties under market based arrangements and contracts will be borne by Fiberight and the plant's investors.

5. *What are the environmental attributes associated with your facility*

- a. *Air emissions, and mitigation thereof*

The Fiberight process incorporates no burning of waste or other materials, so emissions from any Fiberight facility are minimal.

- b. *Discharges, including where discharges will occur and mitigation of discharges*

Water is used in the Fiberight waste process, but most of the incoming water is reused and recycled, resulting in minimal discharge for wastewater treatment. The Fiberight plant design also includes an air scrubbing system, where the entirety of the building is kept under a negative pressure to minimize any potential odors that would otherwise impact the local community.

- c. *Waste material or residuals and description of disposal of such materials*

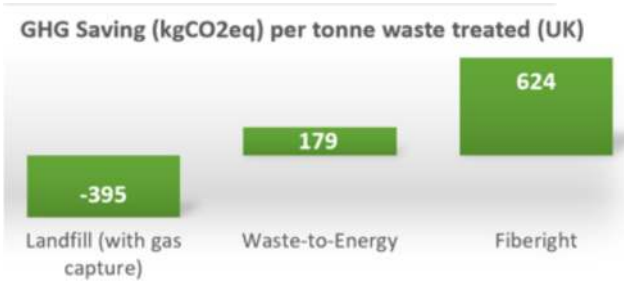
The waste materials or residuals from the Fiberight process typically are materials with no value and may include stones, broken glass, broken plastic, ceramics, etc. These residuals will be stored in bunkers and/or roll-off boxes inside the facility and when full, taken to a nearby landfill for disposal pursuant. Some of this material can be utilized by landfills as an alternative landfill cover, further reducing the amount of residual disposal. As part of the development effort, Fiberight will identify and contract with a regional landfill for the long-term disposal of residuals.

- d. *Beneficial uses*

As described in Question 2, Processed Outputs on page 10, the Fiberight process recovers valuable products and green energy from trash that would otherwise be landfilled.

e. *Other*

Fiberight’s process also offers the community clear environmental and health benefits. Processing waste through an advanced Fiberight recycling facility will recover and repurpose up to seventy five percent (75%) of the MSW received. In early comprehensive testing at the Maine Plant, a recovery rate of over sixty percent (60%) was observed. This means substantially less material from the community will end up in an incinerator or landfill. Fiberight’s process as compared to landfills and waste-to-energy facilities provides a significant greenhouse gas savings.



Source: BioComposites Center, Bangor University

A Fiberight plant can complement a city or town’s existing recycling program and allows cities and towns to dramatically increase their recycling rates. The advanced, industrial MSW sorting process supports “one-bin / all-in” collection reducing or eliminating the requirement for customers to separate, or presort, recyclables from their waste. The robust nature of the Fiberight process allows the elimination of the need for residents to pre-sort their waste altogether while continuing to support increased recycling rates. In addition, the Fiberight sorting process also eliminates the requirement for separate waste collection trucks to collect recyclables, a reduction in waste hauler transportation costs.

6. *Please describe how the project will minimize negative environmental and health impacts of waste management, including minimizing greenhouse gases.*

A critical benefit of the Fiberight process and technology is the elimination of methane gas emissions. When food and other organics are disposed in a landfill, it decomposes and generates methane gas, an explosive substance and greenhouse gas estimated to be twenty times more destructive than carbon dioxide. Landfills establish gas collection systems that attempt to collect and remove methane gas. Unfortunately, these collection systems are unable to collect all of the generated methane gas which ultimately may be released into the environment contributing to the greenhouse effect that causes global warming and climate change. Drains, trenches, and buried utility corridors (such as tunnels and pipelines) can act as conduits for uncaptured methane gas underground movement. The natural geology often provides underground pathways, such as fractured rock, porous soil, and buried stream channels, where the gas can migrate into nearby buildings or homes creating safety concerns.

One of the many unique features of the Fiberight process is that, unlike landfills, it eliminates the greenhouse gases emissions from food and other organics in MSW. The Fiberight process extracts and process the food and other organics from the MSW into methane. This generated methane is then injected into the gas transportation grid as new, carbon-neutral fuel source.

**Community Benefits**

7. *Please describe host community benefits that would be provided as part of your project, and how those benefits would be shared or realized including job creation and workforce training opportunities.*

The host community would be paid a host fee for third-party wastes brought to the facility depending on site selection and ultimate development cost. The amount of the host fee would be determined as part of Fiberight’s due diligence, direct negotiations with the host community and the overall economics of the development.

The facility will require a significant workforce to construct and operate properly. During construction of the facility, Fiberight would expect to employ sixty-five (65) full time employees directly and indirectly during the construction period. During peak construction, Fiberight expects to employ up to one hundred and fifteen (115) full

time employees. Once the plant is placed into commercial operations, Fiberight expects daily employment will range from 65 to 80 people, depending on plant capacity. These jobs will range from entry level positions providing quality control on the MRF to highly technical positions operating specialized equipment. Several leadership positions will be required to oversee operations. The third-party operator (hired by Fiberight) will provide operator training for these new positions and will provide the necessary occupational, health and safety training. The operator will prioritize local applicants when filling these positions.

### **Developer Experience**

8. *Please describe the project team's background and experience developing waste infrastructure projects, including the proposed technology, and your track record for successful development and/or operation. Please provide information on applications of the proposed technology demonstrating how widespread and how the technology has been proven through other development projects.*

Fiberight was founded in 2007 with a goal to develop a technology platform that could take traditional recycling methods to the next level by recovering value from MSW. The Company purchased a 46,000 SF former plastics recycling facility in Lawrenceville, Southern Virginia, and set about re-purposing and permitting it to be able to handle solid waste.

Fiberight secured over \$10M in financing to install an integrated waste processing system that could convert mixed municipal waste into a series of products including paper pulp, sugars, plastic compounds, and biogas. The Lawrenceville facility processed over 1,000 tons of various waste materials and was operated for more than 10,000 hours. Most importantly, Fiberight utilized the Lawrenceville facility to secure data and experience from which to develop a financeable design and robust engineering package that was used for the construction of the Hampden, ME facility.

Leveraging the experience gained in Lawrenceville, Fiberight secured financing for, provided construction oversight and started up a world scale third generation MBT facility in Hampden, Maine. This plant was designed to process 180,000 tons of MSW annually. Fiberight has also financed and constructed a second commercial- scale plant in Swansea, Wales, UK that is expanding its processes for creation of advance plastics and advanced chemicals from pulp supported by UK and EU grants and European companies looking for ways to reduce their carbon footprints.

Additionally, Fiberight has developed a network of industrial partners with core strengths in equipment, design, engineering, biotechnology and catalyst development, in support of Fiberight's proprietary processes. This commitment to disciplined development of a robust technology platform now puts Fiberight at the forefront of the rapidly emerging advanced waste processing industry, unique with its knowledge base and regulatory approval, to create high-value outputs from mixed residential waste.

By operating two integrated waste processing facilities, Fiberight has developed the following institutional experience:

- Mixed waste processing;
- Pulping of organic materials found in MSW;
- Recyclables sorting & recovery;
- Anaerobic digestion;
- Wastewater treatment;
- Catalytic breakdown of pulp derived materials found in waste;
- Plant operating systems (HMI & SCADA); and,
- Secondary processing of plastics and paper.

Further, Fiberight was able to generate significant quantities of finished products, septage samples, and other process related outputs that it has been able to use to confirm market suitability, hazardous waste exemption, and

suitability for disposal and/or combustion. From these efforts, Fiberight was able to secure EPA non-hazardous secondary material determination (NHSM) for paper-based biomass and plastic engineered fuel.

In addition to securing key NHSM determinations, Fiberight was able to produce finished products for testing by end consumers, which products included:

- Paper pulp for papermaking;
- Hydrolysate sugars for use in the manufacture of bio-resins;
- Ethanol and Bio-methane;
- Plastic pellets (polyethylene) that could be used for;
  - Pyrolysis oils and waxes;
  - Plastic product manufacturing;
- Paper products;
  - Paper insulation;
  - Hydro mulch;
  - Animal bedding;
  - Oil absorbents;
  - Plant growing media;
  - Vacu-formed packaging; and,
  - Additives for asphalt.

### **Key Professionals**

Fiberight's management team is comprised of a team of senior executives, each with extensive experience in the solid waste industry.

*Steve Davey                      Chief Executive Officer, Fiberight Global Holdings.*

Mr. Davey has experience in sales, business development, and senior management in different industries including specialty chemicals, and industrial biotechnology. Previously, Mr. Davey was employed by Royal DSM as Vice President of the Bio-based Products & Services Group, and was responsible for U.S. operations for DSM's bio-based portfolio. Previously, Mr. Davey served as Chief Operating Officer of Zymetis, Inc. (acquired by Aemetis, Inc. in 2011) ("Zymetis"), a biotechnology company developing products for the bio-refining and biotechnology industries. Prior to joining Zymetis, Mr. Davey held various roles at the specialty chemicals firm, W.R. Grace, Inc., beginning his career in process engineering and continuing in a series of positions in marketing, sales, business development and in senior management. Mr. Davey has a BS in Chemical Engineering from the University of Delaware and a MBA from Loyola University of Maryland.

*Richard C. Faint, Jr.      Chief Financial Officer, Fiberight Global Holdings.*

Mr. Faint is Chief Financial Officer of Fiberight. He is a reformed lawyer who has been a serial entrepreneur for 40 years. During his career as both a CFO and CEO of public and private companies, Faint has extensive experience in mergers and acquisitions, public and private corporate finance, financial management, and marketing, sales and operations of technology, health care, manufacturing and real estate businesses. Mr. Faint was CFO of the Long Term Care division of TheraTx during its IPO in 1994 and CEO of Sequoia Software during its IPO in 2001. Included in his entrepreneurial finance experience are the two IPO's mentioned above, an MBO from Loral Corporation and M&A and private equity transactions involving Citrix Systems, Viacom, Bostik (a subsidiary of Total S.A.), Warburg Pincus, Baker Capital, Core Capital and Anthem Capital. He began his professional career at Gebhardt & Smith where he became partner and practiced law with specialties in real estate and telecommunications. He received a B.S. degree in accounting from Towson University, and both an M.B.A. and J.D. from the University of Baltimore.



*Nick Thompson Chief Technology Officer, Fiberight Global Holdings; Managing Director. Fiberight LTD.*

Mr. Thompson has worked in a variety of manufacturing sectors including food, chemicals and building materials for over 35 years. Mr. Thompson has had direct project management responsibility for plant startup and rapid deployment of technology at Knauf LTD as Operations Director. Mr. Thompson also has experience relating to business process re-engineering activities primarily focused on capital investment programs as the CEO of Excel Industries. During this time, Mr. Thompson has worked on a number of initiatives involving both the development and implementation of new technologies and the introduction of recycled materials in established manufacturing processes. Mr. Thompson holds a Bachelor of Chemical Engineering degree from the University of Bath, United Kingdom.

*Alan Iantosca Vice President, Engineering & Projects, Fiberight LLC.*

Mr. Iantosca has over 35 years of experience in the chemicals process, power and the water/waste water industries. Before Fiberight, Mr. Iantosca was the Global Vice President of Business Development for the BOC Group (“BOC”), where he was responsible for business development, execution and commercialization of projects in the energy market sector. Before BOC, Mr. Iantosca worked for American Ref-Fuel Company which owned and operated six energy- from-waste facilities in the northeast United States. Mr. Iantosca held the position of General Manager of their \$400,000,000 Resource Recovery Facility in New Jersey. Mr. Iantosca was Head of Engineering and Environmental for a United Kingdom joint venture company and held various management and engineering positions including project manager, project engineer, process engineer, and operations line manager with American Ref-Fuel and prior to that, Air Products and Chemicals. Mr. Iantosca holds a B.S. degree in Mechanical Engineering from Villanova University.

*Carl F. Knowlton Vice President, Head Corporate Development and Asset Management, Fiberight Global Holdings*

Mr. Knowlton is a senior finance professional with an extensive track record of success originating infrastructure investment in the utility, transportation and project finance sectors. In this capacity, Mr. Knowlton financed numerous waste-to-energy facilities including landfill gas, mass burn, and biomass plants. Prior to joining Fiberight, Mr. Knowlton was a Managing Director at John Hancock Financial Services where he sourced, analyzed, structured and negotiated utility, project finance and renewable investment efforts across all power generation technologies. Before his tenure at John Hancock, Mr. Knowlton was a Senior Vice President at the New York City Economic Development Corporation leading the New York City Industrial Development Agency’s efforts to promote economic growth in each of New York City’s five boroughs. Previously, Mr. Knowlton was a critical member of the Public Power Team at Credit Suisse. Mr. Knowlton received a B.S. from the United States Military Academy, an M.B.A. from Northeastern University and is a CFA Charterholder and an Accredited Financial Analyst®.

*Dhivya Puri, Head of Research and Development, Fiberight Limited*

Ms. Puri Dhivya is an experienced and knowledgeable biochemical engineer with a PhD in environmental engineering, Master of Engineering in Chemical Engineering and Bachelor of Science in Genetics. Over the last 16 years Ms. Puri has developed a strong track record of delivering and leading R&D activities focused on biomaterials, bioenergy and waste valorization. After completing a Fiberight-sponsored PhD in 2014, Ms. Puri joined Fiberight and has led most of Fiberight’s R&D projects to date including Innovate UK and the European Union Bio-based Industries Consortium. Ms. Puri has been instrumental in obtaining public funding grants for the company (worth >£15M) for process optimization and R&D into novel value-added products. Ms. Puri has worked on developing the Fiberight IP estate and has a detailed understanding of patent preparation and assessment of Fiberight’s freedom-to-operate in various fields. Ms. Puri leads business development activities associated with communication and dissemination.



## **Financing Arrangements**

9. *Please describe the preferred and acceptable financing arrangements contemplated for the project, including contemplated financing, development, ownership, and operation of the facility; and needed commitments (including duration thereof) from municipalities and other entities with respect to tip fees, and the marketing of other materials and byproducts of the project.*

Fiberight will undertake the identification and selection of an attractive Connecticut location for development and permitting of a waste processing facility deploying Fiberight's innovative technology. Until a site can be secured, Fiberight is unable to provide a proper development plan and cost estimate. However, based upon its experience with the Maine Plant and other development efforts, Fiberight has a detailed understanding of how best to attract the capital required to establish, construct and operate a waste processing facility. Fiberight is happy to provide its view as to the indicative financial requirements necessary to commercialize a resilient waste plant at an attractive tip fee.

### **Contemplated Financing Arrangements**

Fiberight possesses the ability to secure the capital required to properly implement the development and commercialization of a Connecticut based waste facility. Fiberight has established a track record of success in securing capital to develop, construct and operate its waste technology and process. Importantly, it has cultivated deep relationships with capital providers across public and private markets that will allow prompt access to the quantum of required finance to quickly begin to implement any proposed waste treatment and disposal solution.

The financing strategy to construct and commercialize a Connecticut based plant will likely follow a non-recourse financing strategy to raise capital that is repaid only from the profits of the financed project and has no recourse to the owners. This finance approach is often referred to as project financing. Project financing is well accepted by the capital markets particularly for long-term infrastructure and industrial projects. The success of such project finance efforts are dictated by the strength of the commercial aspects of the project. Importantly, this finance approach does not require any Fiberight financial commitments or guarantees. Given this project finance approach, Fiberight's financial strength is not critical to the financial strategy.

Given the success of the Coastal Resources capital raise, Fiberight expects to duplicate the financing strategy for any Connecticut based facility. We expect to employ a project finance, non-recourse approach securing both debt and equity capital to construct and commercialize any plant. The waste project will be incorporated as a legally separate entity and the cash flows segregated for financing purposes. An ownership group consisting of high-net-worth investors and private equity will provide equity and management to the facility. Creditors will provide debt to the project that is non-recourse to the ownership group and repaid exclusively from the cash flows generated by the project.

Based upon our current thinking, we have identified the following likely equity and debt capital sources as described below.

#### **Equity Capital**

Fiberight has a number of strong equity investor relationships that we expect to ask to conduct detailed due diligence of any proposed Connecticut facility. Several institutional and high-net-worth investors have already indicated that they are interested in providing equity capital to Fiberight's efforts once the Maine Plant is returned to commercial operation and a short period of satisfactory performance – expected later this year. Fiberight also maintains a working relationship with several investment bankers that have expressed an interest in facilitating capital investment in a Connecticut facility.

#### **Debt Capital**

Fiberight currently anticipates utilizing tax-exempt bonds to finance a Connecticut facility. We are initiating discussions with the appropriate Connecticut entities to obtain an allocation of tax-exempt volume cap supportive of the effort. Based upon these preliminary discussions, we believe that Fiberight is well positioned to obtain a tax-

exempt allocation. Importantly, we continue to identify and cultivate investment relationships with private lenders. Fiberight has identified several institutional and high-net-worth investors that we believe would be interested in providing private debt to Fiberight's efforts. In addition to this group of potential debt investors, Fiberight has identified additional debt investors that are interested in investment once the Maine Plant is returned to commercial operation and a short period of satisfactory performance – expected later this year. We expect to ask these debt investors to conduct detailed due diligence of the proposed Connecticut facility with the expectation that such participation and investment will supplement or potentially replace a tax-exempt bond investment if such investment is more economically attractive.

### **Financial Underwriting**

Non-recourse financing is complicated and demands the satisfactory review of a number of third-party experts and consultants. Failing to obtain a timely report of such third-party expert or consultant can result in material delays in the finance effort. Importantly, obtaining a less than satisfactory report can result in the failure of the finance effort. Fiberight has established strong working relationships with several independent engineering firms and waste industry consultants. These third-party experts are under non-disclosure agreements and have a detailed knowledge of Fiberight's unique process and technology. Having already identified third-party experts with a detailed understanding and appreciation of Fiberight's technology and process, streamlines the due diligence and underwriting process for both debt and equity investors.

### **Development**

Developing a new waste processing plant from inception to commercial operation is complex and dynamic. The Fiberight planning and design process, informed by the Maine Plant, is tailored to reflect the unique financial, engineering, environmental, and other requirements for each specific plant. Of critical importance to any Fiberight development is satisfying the goals and objectives of the municipalities seeking an environmental waste disposal solution, while recognizing their constraints. In practice, Fiberight seeks to craft a technical solution that generates multiple, robust revenue streams (tip fees, product sales, and renewable attributes) that: (i) enables the plant to access attractively priced debt and equity capital; (ii) provides a satisfactory risk adjusted financial return to the capital providers; and, (iii) results in an attractive tip fee and rebate mechanism that generates a material disposal cost savings to the long-term projected disposal costs of participating municipalities.

### **Ownership**

The company formed to develop, finance, construct and operate the waste processing facility will be a single purpose entity. Ownership of the company will be based upon equity contributions. Fiberight expects to provide a small portion of the required equity capital in order to obtain a minority interest in the plant. Fiberight would also expect to obtain a cashflow interest in the plant subject to the financial performance of the plant. Subject to the strength of the financial projections and the plant's ability to secure attractively priced capital, Fiberight would be open to granting a minority interest in the plant to the participating municipalities to ensure better alignment among the stakeholders and to allow these municipalities participate in the economics of the facility.

### **Operations**

Fiberight would expect to enter into an operations and maintenance services agreement (the "O&M Contract") with a credible counterparty. Fiberight has relationships with several commercial entities that have the waste experience and financial strength to provide comprehensive operations and maintenance support services to a waste processing facility. These support services would include, among other things, hiring and managing all personnel to operate and maintain the facility, the procurement of equipment and supplies for maintenance, developing and managing programs for the safety and regulatory compliance, budgeting, accounting, insurance, information technology and training. The O&M Contract would include an output guarantee and associated liquidated damages for failing to achieve such output guarantee.

## Commitments Municipalities and Other Entities

### Municipal Commitments

Fiberight expects that each municipality that provides MSW to the plant will enter into a long-term contract with the project (the “Waste Agreement”). To secure attractively priced capital, the expected term of the Waste Agreement would be fifteen (15) years with mutual extensions for up to five consecutive periods of five years. Under the contract, each municipality will agree to provide all MSW generated within its jurisdiction. Further the municipality will agree to provide a minimum annual quantity of MSW to the plant. To the extent that such minimum quantities are not delivered, financial penalties will be assessed by the project. The initial tipping fee for each ton of MSW delivered to the facility (the “Tipping Fee”) shall be finalized and agreed between the participating municipalities and the project once Fiberight has secured a project location and completed its due diligence. The Tipping Fee will be subject to an annual adjustment each January 1 during the term of the contract to reflect any annual percentage increase in the Consumer Price Index (“CPI”). As described under Question 4(iv), based upon preliminary analysis of the Connecticut marketplace, Fiberight believes that it will be able to develop a waste processing facility at a Tipping Fee that would (i) generate a material disposal cost savings for participating municipalities versus the long-term projected disposal costs, and (ii) be sufficient to attract the quantum of attractively priced capital necessary to build a waste processing plant.

To ensure alignment between the municipalities and the waste processing facility, Fiberight would expect to pay rebates to the municipalities under the Waste Agreement if certain conditions and financial thresholds are met. In this manner, the contracted municipalities would benefit in the form of lower Tip Fees in the event that the waste plant generates additional revenues from stronger than projected commercial waste tip fees, recyclable prices, product sales or material operational enhancements. The rebates would be calculated as specified percentages of revenue above fixed thresholds and the obligation to make such payments would be subordinate to operating expenses and any debt or equity obligations.

### Other Commitments

Fiberight expects to enter into a number of agreements to support the ongoing operation of a waste facility to include:

- Commercial Waste Agreements – Fiberight would expect to secure additional MSW from commercial entities and haulers within a reasonable transportation radius of the plant.
- Recyclables – Fiberight would expect to secure a portfolio of contracts for the sale and purchase of recyclables materials and products generated by the facility.
- Residual Disposal Agreements – Fiberight would expect to enter into a disposal agreement for the disposal of certain residual material remaining after the processing of MSW at the plant.

10. *Does the project contemplate any energy or environmental attribute offtake agreements under state jurisdiction, or federal funding of any type?*

As described in Question 9, Fiberight seeks to provide participating municipalities with an attractive tip fee and rebate mechanism that generates a material disposal cost savings to the long-term projected disposal costs. To achieve an attractive tip fee, Fiberight expects to pursue a number of finance alternatives to include all federal and state funding programs to include tax-exempt finance, environmental attributes associated with biogas RINs and LCFS. Fiberight is currently working to interpret the provisions of the Inflation Reduction Act of 2022 (the “IRA”). We believe that the biogas component of Fiberight waste projects will qualify under the IRA for investment tax credit (“ITC”) as well as a bonus for domestic content. Fiberight will also consider siting the plant within a Connecticut Qualified Opportunity Zone to access opportunity zone tax benefits.

11. *How will the proposed financing arrangement ensure stable and competitive pricing for municipalities?*

As described in Question 9, Fiberight proposes that municipalities sending their waste to the processing plant enter into a fifteen (15) year contract with mutual extensions for up to five consecutive periods of five years. The length of these municipal contracts protects the municipalities from an unanticipated, material increase to the tip fee ensuring that Connecticut municipalities have both a stable and a competitive disposal solution.

12. *Within what approximate time frame (years) of contract execution would the project be able to commence operation, assuming timely state and local approvals?*

As previously noted, Fiberight has not yet secured a location for development of a waste facility. Until a site is identified and secured and Fiberight commences its development efforts, Fiberight will be unable to provide a detailed estimate as to the commercial operations of the plant. As a rule of thumb, Fiberight generally expects that a new waste processing facility requires three (3) years to develop, construct and commercialize. In providing this time estimate, Fiberight notes that securing the required permits for the facility constitute the largest variable to the schedule and commercialization date.

13. *Please provide information on technology performance guarantees by the technology provider or project developer.*

Fiberight's waste process and technology is well established and proven at commercial scale and therefore Fiberight does not provide technology performance guarantees. The Maine Plant passed its performance tests and satisfactorily processed waste for 6 months. Further, the Maine Plant was financed and commercialized without a technology performance guarantee. Importantly, several third-party engineering firms have conducted detailed reviews and assessments on behalf of investors, contractual counterparties, and stakeholders and have concluded that the Fiberight process and technology is proven.

### **Procurement of Anaerobic Digestors**

DEEP is requesting written public comments on the following questions and topics relating to the deployment of AD resources in Connecticut or other related topics not listed below:

14. *Should DEEP initiate a new procurement for long-term power purchase agreements for electricity and RECs from anaerobic digesters? Should/could such an RFP be coordinated with municipal RFPs for organics diversion services?*

The intended output for the anaerobic digestors in a Fiberight Facility would be biomethane. Therefore the procurement for a long-term PPA would not apply.

15. *If DEEP were to conduct a procurement for energy and RECs associated with anaerobic digestors:*

- a. *What is an appropriate minimum and maximum facility size in MW capacity and or tonnage of waste?*

As described previously, Fiberight builds waste processing facilities sized and designed in accordance with the amount of MSW in the plant's catchment area. Fiberight's plants can be configured to process waste from 150,000 tons per year to 450,000 tons per year. These processing facilities also offer the flexibility to incorporate additional technologies into the plant to include electric generation. The critical development driver to including electric generation in a waste facility is the ability to secure an attractively priced long-term electric offtake agreement with a utility or electric customer for the purchase and sale of the generated electricity.

- b. *What requirements or standards should the procurement put in place for feedstock used at the anaerobic digestors, and how would bidders demonstrate a commitment to any such feedstock requirements and ongoing compliance?*

One of the critical benefits of a Fiberight plant is the robust and proven sorting technologies designed for the efficient fractionation of organic and non-organic wastes. This sorting technology allows the fractionation of food and other organics to be efficiently separated and processed. As a result, the Fiberight process and technology does not require any standards for the collection food and other organics to be used in the AD process. Rather, Fiberight encourages its waste customers to adopt a **One-Bin** solution into local collection infrastructure for the collection of residential MSW and recyclables – which reduces the financial and environmental impact of the waste collection trucks on the roads.

- c. *What considerations should inform any policy for renewable natural gas procurement from anaerobic digesters?*

Fiberight encourages the DEEP to adopt natural gas procurement minimum standards that would require all anaerobic digestors to generate biogas of sufficient quality to allow it to be injected into the natural gas transmission pipeline. Fiberight's AD process generates biogas with a quality sufficient to allow it to be injected into the interstate natural gas pipeline system.

**Exhibit I**

**Coastal Resources of Maine, LLC History and Timeline**

- In 2015, the Municipal Review Committee (“MRC”) selected Fiberight through a competitive process to develop, construct and operate a 180,000 tons per year solid waste processing facility to meet the waste disposal needs of its member communities.
- Fiberight was responsible for all aspects of the commercialization of the plant to include: permitting, design, finance, selection and management of the construction team and plant operator, and marketing of all manufactured products.
- On November 1, 2019, the plant satisfied the performance tests, under the supervision of an independent engineer, and was placed into commercial operations.
- The plant operated for 7 months, confirming all unit operations, validating Fiberight’s waste process and technology at commercial scale.
- The plant suffered from decreased revenues due to depressed market pricing of recycled products and delays in monetizing some of its products for third party sale as a result of regulatory changes to the sale permits.
- The plant was shutdown on May 27, 2020 and was sold to MRC via a receivership process.
- Fiberight is actively engaged with the MRC to return the plant to commercial operations.

Maine Plant Critical Milestones	
2015	Fiberight selected as developer
2016	Negotiation of material agreements
2017	Commenced construction
2019	Completed construction (April)
2019	Achieved commercial operations (November 1)
2020	Plant operations suspended (May 27)
2022	Plant acquired by the MRC

## Exhibit II

### Fiberight Intellectual Property Estate

Fiberight’s core technology (HYDRACYCLE™) from ‘non-segregated mixed waste through to homogeneous products including fibers, recyclables, sugars and biogas’ is the subject of a patent application ‘Waste Processing’. This patent (GB254730) was lodged on 08/12/15 and is currently granted in the US, UK, Europe, Australia and India, and pending in Canada, Malaysia, New Zealand, South Korea and China.

Fiberight has a second patent ‘Hydrolysis’ (Patent no. GB2567266A, lodged 28/04/2017) which covers an optimized process to produce second-generation sugars, for industrial biotechnology, from recovered paper/card pulp. This patent has been granted in the UK and US. It is pending grant in Europe, Hong Kong, Australia, and New Zealand.

Fiberight has freedom-to-operate as established through a 2017 study; this is periodically confirmed through regular country specific search reports arising for the core patent.

Fiberight also has a free to use license for joint technology developed with the University of Leeds in relation to controlling contamination in Hydrolysis. Patent ‘Process and apparatus for reduction in microbial growth in solutions of sugars extracted from waste materials’ no. GB2019/051311 lodged 17/05/2018, active in UK, US, Europe, Hong Kong, Australia, and New Zealand. This patent covers work that arose from an IUK funded project (TSB 45031-305142) and is now published in *Bioresource Technology Reports* (doi.org/10.1016/j.biteb.2020.100612).

In addition to patents, Fiberight’s process and continued development is protected through a number of intellectual property mechanisms including; trade-secrets, know-how, copyright software and operating documents, design secrets, trademark, exclusivity agreements with key suppliers, and employment contract clauses. These IP outputs are captured for use in Fiberight’s licensing package.

The table below outlines various key innovations and their current level of protection. Fiberight has also trademarked the name for their core separation technology – HYDRACYCLE. This trademark is active in the UK, Europe, Australia and New Zealand.

#### Patent numbers for granted patents

##### **Waste processing**

US	US11465156B2
UK	GB201620916A
Europe	EP16826139A
Australia	AU2016366642B2
India	EP16826139A

##### **Hydrolysis**

US	US11535877B2
UK	GB2567266B

#### **Future IP development**

Further to the core process Fiberight are developing secondary processing bolt-ons to upgrade the various resource streams. The three key areas of development are the ‘Pulp’, ‘Sugar’ and ‘Plastics’ platforms.

The pulp platform uses the clean recovered pulp (paper/card) and upgrades it to direct products including; renewable biomass fuels, animal bedding, pulp molded products and fiber for composite materials. Fiberight is continuously developing and capturing new IP related to this upgrading process. The development is being undertaken with direct involvement of customers, helping to ensure that the products are fit-for-purpose and marketable.



The sugar platform investigates the conversion of sugar into higher-value products for industrial biotechnology applications. Here Fiberight is working with academic and industrial partners to advance the sugar platform and produce various output products with offtake stakeholders (i.e. thermoset resins, lactic acid, PLA, and ethanol). In this platform Fiberight either owns the IP or gains free licenses to use any jointly developed IP. Beyond the current identified development chemicals and fuels, Fiberight's cost-effective sugar platform will enable access a multitude of green fuels and chemicals once deployed at scale. Fiberight is currently implementing a demonstration scale hydrolysis plant to demonstrate economically viable clean-sugar production from waste, at their site in Swansea.

In addition to the production of sugar, the hydrolysis process outputs a lignin-rich residual solid - post-hydrolysis solids (PHS). This PHS is being tested for use, with academic and industrial partners, in applications including: biomass fuel, additive to grouts/adhesives/epoxy resins, additive to polyurethane and as a component in plastic composite products.

The plastics platform is developing sorting and recovery strategies for all the flexible and rigid plastics in the waste stream. These plastics can be separated into clean, high purity (99%) polyolefins (PE and PP) and PET for mechanical recycling applications. Residual mixed plastic can be used within a chemical recycling bolt-on to convert the plastics back into oils and waxes. Fiberight are developing IP that integrates its core technology with innovative sorting and recycling solutions to maximize the recovery of plastic. Fiberight will own, or have free-to-use license, for all IP related to 'mixed-waste to clean, sorted plastic materials.