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To: DEEP RecyclingProgram; Dykes, Katie; Isner, Robert; Hahn, Chelsey

Ag-Grid Response Letter - CCSMM Connecticut DEEP 10-13-2020.pdf

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Dear DEEP Representatives,

Please see the comments from Ag-Grid Energy on questions posed by CCSMM.

Thank you for giving us an opportunity to respond to the questions.

Look forward to working with you all going forward.

Thanks

Rashi

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Rashi Akki

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Connecticut Department of Energy and Environmental Protection

Attn: Commissioner Dykes

79 Elm Street

Hartford, CT 06106-5127



October 13, 2020

Commissioner Dykes,

Thank you for your support of development and siting of Anaerobic Digester infrastructure in State of Connecticut. Ag-Grid Energy has been actively pursuing siting of two dairy farm digesters that can receive food waste in Connecticut. Our first project, at Fort Hill Farms in Thompson CT, is under construction and would be operational before the end of this year. Ag-Grid Energy is very appreciative of the CT DEEP for their support on the first ever such air permit, solid waste permit, Comprehensive Nutrient Management Permit and Storm Water Construction permits. It did take effort on the side of both us and DEEP to get through the steps. So finally, we are close to ramping up the operation of this facility which is exciting.

Fort Hill Ag-Grid can receive liquid food waste. We expect to process 20,000 tons/year of liquid food waste at this facility.

I am writing to you about our 2nd facility that we are trying to develop. This site would be on Hytone Dairy Farm in Coventry CT. We are planning to add a depackager to this site in addition to the anaerobic digester. This would allow us to receive solid and packaged food waste in addition to liquid food waste.

Ag-Grid Energy has developed a very similar project at Rockwood Farms in Granville, MA. Rockwood Farms has a dairy digester and a depackager that is operational. Granville MA is a mile away from Connecticut border and we invite you and the municipalities to visit our site so that they can visualize what we can receive in terms of food waste.

Ag-Grid Energy's dairy digester projects are very useful for the dairy farms as they support the farm sustainability along with reduced odors from manure spreading as well as enhanced nutrient management that are available for the crops. These projects produce renewable electricity and power the farms and our municipal partner accounts. Ag-Grid Energy currently has two operational digesters in Massachusetts, one coming online in CT and two under development for next year (one in CT and one in NY). Please feel free to check our website www.aggridenergy.com for more information.

Questions for Response

1. Are there any model programs, best practices, or innovative concepts that the Coalition should consider, that could provide a scalable solution in any of the Focus Areas, listed above?

Ag-Grid Energy can offer 3 dairy digesters as solutions for the organics diversion.

1. Digester1 - Fort Hill Ag-Grid is able to receive liquid food waste and channel it to our dairy digester located in Thompson CT.
2. Digester 2 - Rockwood Ag-Grid digester and depackager is already operational and that site is located in Granville, MA. There are 5 CT municipalities, Hartford, Manchester, East Hartford, Bloomfield and Granby, that are within an hour away from Granville MA. We would very much like to work with them to identify the pick-up and transportation mechanisms that are reasonable. This site can receive liquid, solid and packaged food waste.

3. Digester 3 - Our new site, Hytone Ag-Grid in Coventry CT, would have a digester and a depackager similar to Rockwood. Coventry site would receive liquid, solid and packaged food waste. We are expecting to be able to receive 75 - 100 tons/day of food waste.

2. For any solution identified in Question 1, what are the barriers that need to be addressed in order to advance any of these solutions at scale in Connecticut?

Ag-Grid Energy would begin construction of Hytone Ag-Grid digester if the barriers below can be removed.

1. We need to ensure availability of food waste in the local area within 50 miles of the site. We would like to contract with municipalities to take up to 100 tons/day of food waste.
2. Ag-Grid Energy can receive the food waste, but we do need input in the design of the depackager building so that we can be versatile. We need to understand the format in which the food waste would be delivered to our site. We need to understand if the food waste would be coming in compacters, palletized boxes, totes, barrels etc. We want to ensure that we have the unloading docks designed appropriately.
3. Ag-Grid Energy cannot support the pick-up and transportation. But we are willing to work with haulers on behalf of the municipalities to work on creating a solution to simplify the pick-up and transportation of the waste.

3. For any solution identified in Question 1, please describe the types of implications or benefits that the solution provides with respect to: a. Sustainability- environmental benefits, b. Reducing costs

Ag-Grid Energy is building digesters in partnership with the dairy farms. Dairy farms and our environment benefit by adding the anaerobic digester and diverting the organics in the manure and food waste for beneficial uses such as

1. Renewable electricity – the digester at Fort Hill Ag-Grid would produce 3.5 million KWH's/year. Hytone Ag-Grid would produce another 3.5 million KWH's/year. The renewable energy provides a mechanism to the State to meet its goals for renewable energy.
2. Mitigation of methane emissions – both manure and food waste produce methane and release methane in the environment. The digester allows us to divert organics from food waste as well as manure in an anaerobic environment to produce and capture methane that can then be used to produce renewable energy.
3. Reduction of odor – manure and food wastes produce odors that are related to sulfides. Hydrogen sulfides produced in the manure and food waste are captured in the scrubbers and they help reduce odors and emissions of sulfur to the environment.
4. Digesters also allows organics diversion so that more of the waste is recycled. If organics are removed from the recyclables – it would also lead to a better recycling stream.
5. Overall – digesters can receive food waste at lower costs, assuming that a pick-up and transportation strategy can be created. I believe that if more municipalities would participate – we will see a more efficient use of trucks and reduction in transportation costs. This would lead to reduction in overall organic waste handling costs. Ag-Grid energy is willing to do its share of reduced pricing of the organics waste tipping fees for the municipal customers.

4. Would you be interested or willing to present to the Coalition or a Coalition working group on solutions you've highlighted, or is there another speaker or organization that would be helpful for the Coalition to hear from on this topic?

I, as a CEO of Ag-Grid Energy, would be willing to present to the Coalition or its working group and highlight how Ag-Grid Energy represents a portion of the solution for the organic diversion for useful purposes that positively affect the environment.

5. DEEP can play an important role in advancing sustainable materials management solutions, including: issuing RFPs for long-term energy contracts to support anaerobic digestion facilities; providing grants for collection trucks powered by compressed natural gas (CNG) or electricity through the Volkswagen settlement; employing different approaches to permitting innovative technologies; and streamlining permitting processes. Are there things that DEEP should do differently in its approach to any of the above roles/functions, that would better support sustainable materials management in Connecticut?

There are many ways DEEP can support the process. Some of those ways are

1. Supporting grants for digester facilities,
2. Continuing to support the Virtual Net Metering legislation,
3. Creating a separate LREC category for digesters and valuing them based on carbon reduction that digesters provide
4. Ag-Grid Energy went through the permitting process for the first farm digester that produces electricity. I do believe that having gone through the process one time would help the facilities in the future. DEEP could reduce permit requirements for smaller farm digester facilities.
5. Providing tipping fee relief – once we meet the efficiency in the trucking routes, we will be able to support the cost structure. However, until then DEEP could provide a tipping fee relief of \$/ton to bridge the gap. A timeframe of 18 to 24 months is required to get to the steady state where DEEP could provide this relief to incentivize opportunity for early movers.

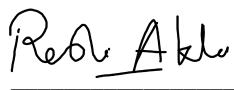
6. Are there any solutions that you would like the Coalition to know about that do not fit within the Focus Areas above?

I do believe that DEEP has covered the key areas and we appreciate the support of DEEP for anaerobic digestion as a critical method to manage organics diversion.

7. Are there any aspects of the Focus Areas, listed above, that the Coalition should not consider (and if so, why)?
N/A

Thank you for giving us the opportunity for providing the solutions for the waste management in the State of Connecticut. We look forward to a collaboration in moving towards a better future.

All the best,



Rashi Akki

CEO & Founder

AG-Grid Energy LLC