January 9, 2018

Honorable Kathleen H. Burgess
Secretary to the Public Service Commission
Three Empire State Plaza
Albany, New York
12223-1350

RE: Dairy Farmers of America (DFA); Agri-Mark Cooperative (AM), and Vanguard Renewables Comments on VDER Proceeding 15-E-0751 and Matter Number 17-01276

Dear Secretary Burgess:

Attached for comment filing in cases 15-E-0751 and Case 15-E-0082 please find comments from joint petitioners Dairy Farmers of America (DFA); Agri-Mark Cooperative (AM), and Vanguard Renewables. These comments build on the submission of May 5, 2017 made by this group to have creation of a Farm Distributed Generation process to be used for the proposed stack pricing in Case 15-E-0751 and Case 15-E-0082 by using farm based digesters.

We also note there has been discussion: “In the Matter of the Value of Distributed Energy Resources Working Group Regarding Value Stack” Matter Number 17-01276. These comments would also apply to this file.

The original filing would mimic for farm digesters the process mechanism used by the Commission in these cases for Community Distribution Generation, but using a food supply chain community with the tariffs as outlined in the cases rather than a solar centric community.

As the Commission has issued a stack-tariff for solar under the CDG, replacing net metering, it now allows for comments/suggestions on specifically how this same CDG process, replacing net metering for digesters, could be applied for a stack tariff for the food supply chain community with farm digesters (new and already existing).

Respectfully,

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VDER Proceeding (15-E-0751)

Also comments on: "In the Matter of the Value of Distributed Energy Resources Working Group Regarding Value Stack" Matter Number 17-01276

1. Farm-based Anaerobic Digestion should be considered an “intermittent resource” and thus receive the same capacity value as solar CDG projects

The first capacity alternative outlined in the VDER Implementation Order provides the greatest value on a per MWh basis but is only available to “intermittent resources”.

NYISO’s definition of intermittent resources states that; “A device for the production of electricity that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.”

Under this terminology, a farm-based anaerobic digestion project must be considered an “intermittent resource” considering that renewable energy is generated through a variable biological process that cannot be stored or systematically controlled by the plant operator.

The definition goes on to say: “In New York, resources that depend upon wind, or solar energy or landfill gas for their fuel have been classified as Intermittent Power Resources.”

Landfill gas projects are particularly analogous to anaerobic digestion, both being a process that turns organic material into methane and then uses it to produce power, with the only difference being that in a landfill gas project the generator is placed at a landfill and in an anaerobic digestion project the organic waste is brought to the generation site. Our recommendation is for the commission to utilize and clearly state that anaerobic digestion is included in the intermittent definition, effectively making alternative 1 in its current form applicable to farm-based anaerobic digestion technologies.

2. The 40% limit on allocation to demand-based customers should be removed for CDG customers that “participate in the supply chain of the DER”

The VDER Phase 1 Implementation Order states that CDG sponsors must ensure at least 60% of the projects credits are allocated to mass market subscribers. This is to ensure that the benefits of CDG are distributed within the community they serve. While we believe that it is very important for a broad base of customers to enjoy the benefits of a CDG project in the food supply chain. In the case of project driven by organics waste taken to a farm digester to be used as an energy feedstock, we believe that the same objective for a broad base of users in the same supply chain is achieved if the generated energy can be allocated to those who supplied the organic feedstock to the farm digester.

In the order, the commission defines mass market subscribers as:

“customers within a jurisdictional electric utility’s residential or small commercial service class that are not billed based on peak demand. “

According to National Grid’s classification for small commercial and industrial customers, those with greater than 2,000 kWh per month consumption are classified as demand customers. Referencing the VDER customer load profiles for small food commercial customers, even the smallest food customers are substantially outside the threshold for this classification (see Table 1 below).

As per the current terminology, although including mass market customers allows projects to earn a higher rate for their power, farm based AD projects will require an excessive number of mass market customers to offtake all of the credits. For example, a 2 MW AD project with 40% of its generation going to large demand based customers, will need over 500 customers to offtake the remaining 60% of generation. The additional cost of acquiring and servicing these customers will have a large impact on the project’s economics, and more

Comments VDER Proceeding 15-E-0751 and Matter Number 17-01276
January 9, 2018
Vanguard Renewables, Dairy Farmers of American and Agrimark Cooperative
than offset the additional revenue from the higher rates. The requirement to acquire mass market customers will also significantly prejudice a project's ability to access project finance (while there is a well developed industry lending to wind and solar projects so this requirement may not stand in the way of debt financing, there are very few lenders to anaerobic digestion projects and they would not lend against a small customer offtake regime who are not members of the food supply chain).

More importantly, the requirement ignores the value to the New York food manufacturing community of being able to use their waste (feedstock) to create a so-called “Closed Loop Supply Chain.” In a Closed Loop Supply Chain, an organic waste generator (a food processor or commercial feeder/distributor/restaurant) supplies its waste to an anaerobic digestion site for feedstock, which in turn generates energy, which it in turn sells back to the organics generator. Customers with a focus on sustainability award buying preference to suppliers who can claim to have a Closed Loop Supply Chain, creating real economic value for these suppliers. More sustainability more business for the New York food suppliers.

We recommend removing the current restrictions on demand based customers when a CDG project allocates 100% of the total power generation to customers participating in the food supply chain of the DER. Under this scenario, a CDG project in food would still require a community of 10 or more participants as defined by the Commission. The pricing mechanism would be the same but allowing up to 100% DRV or MTC for ALL generation sold in food. This would encourage a diversification of CDG technologies and business models, while aligning the order with other state initiatives, more specifically county and city existing and the proposed state-wide landfill disposal ban for organic food waste.

![Table 1](Ref: VDER Value Stack Calculator v1.3)

*Denotes typical supply chain participants of farm-based anaerobic digestion projects

3. The net metering rule that limits SSO to 50% of total feedstock should be removed

Carrying over into the value stack regime the old requirement under the net metering rules that a farm-based anaerobic digestion project must use manure for 50% of its feedstock, and thereby limiting the amount of organic waste (generally referred to as Source Separated Organics or SSO) that a digester can take, gives AD CDG projects an inherent disadvantage relative to other technologies feedstocks regarding both the upfront capital investment as well as the annual operational expenses. There should be no penalty for the same intermittent resource.

SSO has significantly higher energy content relative to manure, so requiring the digester to use a lower percentage of SSO will require a 30% larger digester to generate the same amount of power, increasing the costs and reducing the economic viability of digester projects. In addition, a 2 MW project would generate 7.8m gallons of additional digestate (the effluent which is produced by the digester) leading to an additional at least $160,000 of operating expenses per year. Currently operating digesters in MA typically use about Comments VDER Proceeding 15-E-0751 and Matter Number 17-01276 January 9, 2018 Vanguard Renewables, Dairy Farmers of American and Agrimark Cooperative
30% manure and 70% SSO. The 50% manure requirement is largely responsible for the lack of digester growth in New York.

It should also be noted that the 50% restriction also has significant indirect costs to New York. The higher manure percentage reduces the nutrient value of the digestate (which is used as a non-chemical fertilizer by farms) thereby diminishing the economic and environmental value of the digester to the New York farming community. In the MA farms with digesters, the annual crop yield from fields fertilized by high nutrient digestate is significantly better (at much lower cost) than when the fields were fertilized by manure and chemical fertilizers.

This limitation also significantly reduces the value of the digester to New York State as an organic waste disposal destination (by limiting the amount of SSO the digester can take). As many communities in New York seek to reduce and reuse their organics waste stream, artificial reductions in the amount of economically viable, socially accretive disposal capacity seems at odds with the state’s broader objectives.

We argue that this rule, which was implemented under net metering (NEM) is not consistent with the current objectives provided by the Commission, conflicts with other state initiatives, and explicitly penalizes farm-based anaerobic digestion projects. Thus, this requirement should be removed as a qualification for the value stack.

Other considerations for VDER Phase 2

Additional environmental value for reduction in GHG emissions from manure/food waste (NY Cow Power Coalition – item 25)

“This transition, the Commission explained, will encourage the location, design, and operation of DER in a manner that maximizes benefits and value to the customer, DER suppliers, the electric system, and society while also ensuring the development of clean generation needed to meet the necessary and aggressive goals embodied in the Clean Energy Standard (CES)2 and other State initiatives.” (VDER Implementation Order issued 9/14/2017)

In the quote above, the commission details the goals of the order including maximizing the benefits to society. Given that certain technologies offer additional external benefits to society, more specifically reductions in greenhouse gas emissions from manure and organic food waste, a standardized REC across all technologies is not appropriate.

The methane produced by manure and organics waste is particularly harmful from a greenhouse gas perspective, and by destroying it, farm based anaerobic digestion projects are performing an important social good. In the comments submitted by the "NY Cow Power Coalition" (item 25), they provide a comprehensive approach to quantifying the value of GHG reduction. We believe this approach sufficiently captures the value added to society and aligns the value stack with other environmental state initiatives that encourage the sustainable storage of manure and proper disposal of food waste. This additional value could be recognized by a specialized REC tied to the methane value destroyed, or by adding an attribute to the value stack.

Incorporating a "market pull" credit from consumers willing to pay a premium for specific environmental attributes (NY Cow Power Coalition – item 25)

As described by the NY Cow Power Coalition, specific technologies have the ability to generate market demand at a premium price because of the environmental or social value they are perceived to create for the consumers of that power. These technologies should be compensated under the value stack for any premium they are able to achieve. We agree with their recommendation that a “market premium” credit be established.