August 8, 2018

Honorable Kathleen H. Burgess  
Secretary to the Public Service Commission  
New York State Department of Public Service  
Three Empire State Plaza, 19th Floor  
Albany, NY 12223

Re: Case 15-E-0751 – In the Matter of the Value of Distributed Energy Resources

Case 15-E-0082 – Proceeding on Motion of the Commission as to the Policies, Requirements and Conditions For Implementing a Community Net Metering Program

Matter 17-01276 – In the Matter of the Value of Distributed Energy Resources Working Group Regarding Value Stack

Dear Secretary Burgess,

On March 9, 2017, the New York State Public Service Commission (“Commission”) issued an Order on Net Energy Metering Transition, Phase One of the Value of Distributed Energy Resources, and Related Matters1 (“Phase One Order”) which recognized “VDER [value of distributed energy resources] tariffs will be expanded beyond NEM-eligible [net energy metering eligible] DG [distributed generation] technologies to all DER in a technologically-neutral, value-focused manner as soon as practicable.”2 The Phase One Order also recognized that “it is a key principle of REV that regulation and tariffs should be technologically neutral and focus on values provided and costs imposed by a DER and their behavior.”3

In order to progress towards the Commission’s goal, Department of Public Service Staff (“Staff”) worked with stakeholders in Case 15-E-0751 and Matter 17-01276 for several months, to develop a process for expanding technology eligibility in value of distributed energy resources “VDER” tariffs. On December 18, 2017, Staff filed a Discussion Document on VDER Value Stack Expedited Eligibility Expansion (“Discussion Document”) in Matter 17-01276, for review by interested parties.4 Comments on the Discussion Document were filed in the same Matter on January 10, 2018.5 Subsequently, the Staff Proposal on Value Stack Eligibility Expansion

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2 Cases 15-E-0751 and 15-E-0082 – Phase One Order, at page 46.
3 Cases 15-E-0751 and 15-E-0082 – Phase One Order, at pages 45, 46, 94, 137 and 138. It should be noted that the quotation cited is on page 46, while the concept is reinforced several times throughout the Phase One Order.
4 Matter 17-01276 – Staff Discussion Document on VDER Value Stack Expedited Eligibility Expansion, filed on December 18, 2017.
(“Staff Proposal”) was filed on May 22, 2018. The Commission also issued a Notice Soliciting Comments on Staff Proposal and Related Matters on May 22, 2018 (“May 2018 Notice”), requesting public comments be submitted by August 6, 2018. In response to the Commission’s May 2018 Notice and the Staff Proposal, National Fuel Gas Distribution Corporation (“Distribution” or the “Company”) hereby submits these comments.

1. Combined Heat and Power (“CHP”) should be a Value Stack eligible technology

CHP positively impacts the health of local economies and supports state and national policy goals in a number of ways:

- Improving energy efficiency by capturing heat that is normally wasted;
- Enhancing energy resiliency and security by reducing energy requirements, and helping businesses weather energy price volatility and supply disruptions;
- Advancing climate change, environmental and emissions goals;
- Improving business competitiveness by increasing energy efficiency and managing costs;
- Increasing the resiliency of energy infrastructure by limiting congestion and offsetting transmission losses;
- Developing more reliable inventories of backup power; and
- Diversifying energy supply, by enabling a further integration of domestically produced and renewable fuels.

The benefits of CHP are aligned with several Reforming the Energy Vision (“REV”) goals, as well as the goals of the 2015 New York State Energy Plan. Making CHP Value Stack eligible will afford proper compensation for the important value that the technology brings to society, as it relates to the production and delivery of electricity to the grid. Removing barriers established for this technology, under the legacy net metering (“NEM”) construct (i.e., restricting the technology’s compensation to limited, micro residential applications), is consistent with the guiding principle of technology neutrality in the Commission’s Phase One Order.

2. It is undeniable that CHP provides energy, capacity, demand reduction, and locational system relief value to the grid

When considering potential technology eligibility expansions, the Staff Proposal itemizes individual elements within the value stack, and makes recommendations at the micro, element-level. Specifically, the Staff Proposal identifies the following compensation elements:

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• LBMP – energy value, based on the commodity purchase offset for each kWh injected, measured as the current wholesale energy price;
• ICAP – capacity value, based on the capacity purchase offset, for each kWh injected, similar to the capacity credit previously provided under NEM;
• E – environmental value, based on the latest Tier 1 Renewable Energy Credit (“REC”) procurement price published by the New York State Energy Research and Development Authority (“NYSERDA”) as part of the Clean Energy Standard, measured as a “locked” value for 25 years;\(^\text{11}\)
• DRV – demand value, based on physical reductions to the grid’s peak demand;
• LSRV – locational system relief value, available in certain limited locations (e.g., areas of grid constraints or operational challenges); and
• MTC – market transition credit, only to be made available to certain projects during the transition from the legacy NEM construct to the value stack.

As respects CHP, Staff recommends that no compensation be awarded at this time for any value stack element.\(^\text{12}\) Instead, Staff’s recommendation is to continue a regulatory process that confirms CHP is “no worse than system power,” and that the technology would not unreasonably increase local pollutants.\(^\text{13}\) The Company notes that these topics are related to the “E” environmental value element.

Excluding CHP entirely from value stack compensation ignores the energy, capacity, demand, and locational system relief values the technology consistently provides the grid. Stated otherwise, “closing the door” on the “LBMP,” “ICAP,” “DRV,” and “LSRV” elements for CHP, would improperly understate the technology’s overall level of value stack compensation. Such an approach is not technology neutral, does not properly compensate each technology for the specific and measurable values provided for the market and society, and is inconsistent with the Commission’s Phase One Order.\(^\text{14}\) The Company also notes that Staff’s Discussion Document originally recommended that CHP receive compensation for the “LBMP,” “ICAP,” “DRV,” and “LSRV” elements,\(^\text{15}\) and as such, Staff has already recognized the benefits CHP is capable of providing.

Since the MTC element was designed to only be made available to certain projects during the transition from NEM to the value stack, it makes sense that the MTC element does not apply to CHP projects that are newly eligible to receive value stack compensation.

The Commission should revise the Staff Proposal for CHP, and make the resource immediately eligible for value stack compensation without the need for further study. At a

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\(^\text{11}\) The “E” environmental value will be discussed later in Distribution’s comments.
\(^\text{13}\) Case 15-E-0751 and Matter 17-01276 – Staff Proposal, at pages 7 and 8.
\(^\text{14}\) Cases 15-E-0751 and 15-E-0082 – Phase One Order, at page 46: “it is a key principle of REV that regulation and tariffs should be technologically neutral and focus on values provided and costs imposed by a DER and their behavior.”
minimum, CHP should become eligible to receive “LBMP,” “ICAP,” “DRV,” and “LSRV” compensation.

3. Several resources that are already value stack eligible are used in CHP applications

CHP is not a “standalone” technology, instead, it is versatile and can utilize nearly any type of gas, liquid, or solid fuel. In application, CHP systems are capable of using renewable fuels such as biogas, bio-methane, and renewable natural gas. In particular, renewable natural gas has several benefits, including but not limited to: reductions in greenhouse gas emissions, increased domestic energy production, improved waste management (including potential reductions in groundwater contamination and run-off into local waterways), new revenue sources for American farmers, and innovative domestic job creation opportunities. CHP can also be run on fuel cells, which use an electrochemical process to convert hydrogen to electricity and water.

Simply put, CHP can operate using resources that are already value stack eligible and are currently eligible to produce Tier 1 RECs [emphasis added], a reason why CHP should receive value stack compensation. The Commission should make CHP eligible for value stack compensation, including compensation for the “E” environmental value element.

4. The concept of “no worse than system power” was already considered during the value stack working group process

The Staff Proposal recommends that no compensation be awarded at this time for CHP applications, and that additional regulatory process continues, assuring the environmental impact of such resources would be “no worse” than bulk system power.

During the value stack working group process, this regulatory process has already occurred. Specially, Staff circulated a proposed efficiency standard for CHP, which was being used in a Con Edison standby pilot. This document specified minimum equipment efficiencies as well as emissions standards. A copy of the proposed efficiency standard was included in Appendix B to the Discussion Document, and has been on record for nearly eight months. Parties have had ample opportunities to provide feedback to Staff on the proposed efficiency standard (including the opportunity to provide written comments).

With respect to ensuring that CHP is “no worse” than system power, Staff has not imposed such a constraint on any other competing technology. Moreover, the United States Department of Energy (“U.S. DOE”) has already concluded that a properly designed CHP system will typically operate with an overall efficiency level that is 20% to 30% higher than grid power and thermal being provided separately (i.e., traditional power plants and on-site boilers).

16 Case 15-E-0751 and Matter 17-01276 – Staff Proposal, at Appendix A. According to Appendix A, farm waste and fuel cells are already value stack eligible, and both can be used in CHP applications.
17 NYSERDA’s Tier 1 Eligibility and Certification Guidelines – publicly available at: https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Standard/Renewable-Generators-and-Developers/RES-Tier-One-Eligibility/Eligibility.
The Company believes ample regulatory process has already occurred, continuing such process (in an undefined fashion) is unnecessary, and the U.S. DOE has already confirmed that CHP is significantly more efficient when compared to grid power.

5. Efficiency standards should be applied consistently, in a technology neutral manner

With respect to the concept of minimum equipment efficiency levels, Distribution is unclear as to why CHP would be required to have a minimum efficiency level in order for the technology to receive value stack compensation, when minimum efficiency levels are not specified for all other types of DER technologies, in order for those technologies to receive value stack compensation. This approach is inconsistent with the principle of technology neutrality included in the Commission’s Phase One Order, and also seems to inadvertently introduce a new barrier into the market for CHP. As an illustrative example, the preliminary definition for CHP (i.e., Appendix B to the Discussion Document) specifies a minimum efficiency level of 60%, an efficiency level that is more than 160% higher than the typical efficiency level of solar panels, another DER technology that is currently eligible for Value Stack compensation. A September 2017 EnergySage article recently published solar panel efficiencies by manufacturer, finding the most efficient commercially available solar panels in the market have efficiency ratings as high as 22.5%.

The Commission should clarify if efficiency standards should be a condition of receiving value stack compensation, or if they are not required for that purpose. Should the Commission determine that efficiency standards are necessary, the Commission should affirm that they be applied in a consistent and technology neutral manner.

6. CHP emissions standards and air quality regulations already exist

The Staff Proposal recommends that no compensation be awarded at this time for CHP applications, and that additional regulatory process continues to assure that CHP does not unreasonably increase local pollutants.

With respect to emissions standards, CHP technologies are already capable of meeting or exceeding air quality regulations throughout the United States, including states such as California that have demanding emission limits for the technology. CHP installations can integrate an exhaust treatment technology such as an oxidation catalyst or a selective catalytic reduction system, in order to achieve emissions compliance. In New York, the Department of Environmental Conservation (“NY DEC”) adopted 6 NYCRR Part 222, which specifies emission limits for economic dispatch sources, including CHP. 6 NYCRR Part 222 also has provisions for control requirements, permitting, emissions testing, and recordkeeping.

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Since an emissions standard already exists, the Commission does not need to develop a separate and duplicative rule, solely for the purpose of value stack compensation eligibility. Assurance is already in place that CHP cannot unreasonably increase local pollutants.

7. Making CHP value stack eligible could improve electric vehicle charging station economics and alleviate rate design issues

On April 13, 2018, a Joint Petition for Immediate and Long-Term Relief to Encourage Statewide Deployment of Direct Current Fast Charging Facilities (“DCFC”) for Electric Vehicles (“Joint EV Petition”) was filed with the Commission, by the New York Power Authority (“NYPA”), New York State Department of Environmental Conservation, New York State Department of Transportation, and the New York State Thruway Authority (collectively the “state agency petitioners”). Distribution shares the state agency petitioners’ concerns regarding the transportation sector emissions and believes the use of natural gas should be included as part of the solution. Distribution believes CHP could be the solution to several issues currently being considered in the Commission’s electric vehicle proceeding.

By using natural gas-fired CHP to generate electricity on-site, reliability is added to charging stations, transmission losses from the bulk power system are avoided, the need to add to/upgrade the electric utility infrastructure can be alleviated, and concerns surrounding electric utility rate design can be ameliorated. In addition, to the extent CHP becomes a value stack eligible technology, the same CHP system generating electricity for charging stations could also potentially be used to generate and export electricity back to the grid. Value stack compensation could be earned for the electricity sent to the grid, helping to improve the overall economics of charging stations and their owners. Thus, there is a two-fold benefit: (1) the structure would encourage investment in DCFC’s by providing value stack compensation for operators, and (2) the natural gas consumed in DCFC generation essentially replaces diesel/gasoline and is far cleaner than the use of diesel/gasoline consumed in the transportation sector.

8. Value Stack Compensation Could Enhance CHP Project Economics

By way of background, Distribution has provided letters of support for three regional microgrid projects, as part of NYSERDA’s New York Prize Program. One of the three projects proposed a very significant CHP component. The Company has funded a research, development, and demonstration study, analyzing thermal loads throughout the customer’s facility, exploring the feasibility of using CHP to provide both steam and power to critical care facilities. Distribution believes that if a successful project of this scale and prominence were to proceed, it could energize the market for distributed generation and CHP applications, and could result in the further adoption of such technologies throughout the region and across New York State.

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23 Case 18- E-0138 – Joint EV Petition, filed on April 13 2018, by the New York Power Authority, New York State Department of Environmental Conservation, New York State Department of Transportation, and New York State Thruway Authority.
To the extent CHP become a value stack eligible resource, project economics could be positively impacted, depending on the customer/facility’s anticipated usage (i.e., using the electricity on-site or exporting it back to the grid). This is important from an economic development perspective because projects “on the fence” may potentially come to fruition, due to shorter payback periods and revenue stream opportunities for customers.

9. A process should be identified to align a potential Commission decision on value stack eligibility expansion with Public Service Law (“PSL”) §66

In a prospective Order, the Commission should identify a process, identifying how a decision on value stack eligibility expansion would “become aligned” with current PSL §66. The Company makes this comment at this juncture, because it is possible for a mis-match in language, between a Commission Order and existing state law, to inadvertently serve as a barrier in the REV market (i.e., market actors may not act until language is effectuated in both locations). This is especially the case for all technologies that are currently eligible, or are newly becoming eligible for value stack compensation, that previously were ineligible under the legacy NEM construct.

The Company appreciates the opportunity to submit these comments in response to the Staff Proposal and May 2018 Notice. If you have any questions regarding Distribution’s comments, please contact us at your convenience.

Respectfully submitted,

/l/ Evan M. Crahen
Evan M. Crahen
Director
Rates and Regulatory Affairs
National Fuel Gas Distribution Corporation
(716) 857-7440
CrahenE@natfuel.com

/l/ Ty A. Holt
Ty A. Holt
Senior Attorney
Rates and Regulatory Affairs
National Fuel Gas Distribution Corporation
(716) 857-7735
HoltT1@natfuel.com