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May 29, 2024

VIA ELECTRONIC FILING

Ms. Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
2nd Floor, Room-N201
400 North Street
Harrisburg, PA 17120

Re: Distributed Energy Resources Participation in Wholesale Markets
L-2023-3044115

Dear Secretary Chiavetta:

Enclosed for filing please find Duquesne Light Company's Comments in the above referenced proceeding.

If you have any questions regarding the information contained in this filing, please feel free to contact me.

Sincerely,

Lindsay A. Baxter
Manager, Regulatory and Clean Energy Strategy

Enclosure

cc:
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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Distributed Energy Resources Participation in Wholesale Markets	:	Docket No. L-2023-3044115

COMMENTS OF
DUQUESNE LIGHT COMPANY

I. INTRODUCTION

On February 22, 2024, the Pennsylvania Public Utility Commission ("PUC" or "Commission") adopted an Advanced Notice of Proposed Rulemaking Order ("ANOPR") at Docket No. L-2023-3044115 regarding Distributed Energy Resources Participation in Wholesale Markets. The ANOPR was developed in response to a Joint Motion of Commission Chairman Stephen M. DeFrank and Vice Chair Kimberly Barrow, which was adopted at the November 9, 2023 Commission meeting. The Joint Motion directed the development of an ANOPR to solicit public comments on the Commission's role in the implementation of Federal Energy Regulatory Commission ("FERC") Order 2222, as well as to determine whether any amendments or additions should be made to existing regulations or policy statements to ensure the Commission's compliance with Order 2222. Pursuant to the February 22, 2024 adoption of the Commission's ANOPR Order, a public notice announcing the availability of the ANOPR, and a 60-day comment period was published in the March 30, 2024 *Pennsylvania Bulletin* at 54 Pa.B. 1668.

Through Order 2222, FERC requested that state regulators facilitate the entry of localized distributed energy resources ("DERs"), physically connected at the local distribution level, into

wholesale markets. From Duquesne Light's perspective, this represents a transformative change in the electricity system.

In the ensuing comments, Duquesne Light submits for the Commission's consideration its initial position on the issues raised in the ANOPR. As dialogue progresses on how Pennsylvania will implement Order 2222, Duquesne Light anticipates that new, currently unforeseen, issues will arise. While Duquesne Light commends the Commission for issuing its ANOPR, which identifies the key issues that stakeholders must address to successfully integrate DERs into the wholesale market, it anticipates further dialogue will be necessary between the Commission and stakeholders. Duquesne Light stands ready to be an effective contributor to these future discussions.

II. BACKGROUND

Duquesne Light is a public utility as the term is defined under Section 102 of the Public Utility Code, 66 Pa. C.S. § 102, and is certificated by the Commission to provide electric distribution service in portions of Allegheny County and Beaver County in Pennsylvania.[1] Duquesne Light provides electric service to approximately 605,000 customers in and around the City of Pittsburgh.

Duquesne Light has a vision to enable a clean energy future for all and seeks to serve as a trusted partner to customers by providing the products and service offerings for today and tomorrow. As of May 2024, there are approximately 8,000 generators interconnected in the Company's service territory.

[1] Duquesne Light is a member of the Energy Association of Pennsylvania, which is also submitting comments at this docket. In addition to the positions stated herein, Duquesne Light generally supports the positions articulated in EAP's comments to the extent they are consistent with the comments submitted by the Company.

III. COMMENTS

FERC Order 2222 represents a significant shift in how energy markets have historically operated. The ANOPR explains "…FERC, in exercising its Congressional mandate under the Federal Power Act, expressly reserved a substantial role for the PUC to implement Order 2222 in Pennsylvania." (ANOPR at 17) Duquesne Light strongly encourages the PUC to exercise its jurisdiction on this matter. With more crossover between retail and wholesale programs, there may be instances where it is unclear which entity has jurisdiction. However, the PUC has express authority over electric safety and reliability. The Commission must exercise its full jurisdiction to ensure Order 2222 implementation occurs in a way that is not counter to the interests of Pennsylvania energy consumers.

As Duquesne Light continues to assess and prepare its own systems and processes for administration of Order 2222, it has identified several guiding principles.

1. **Need for future flexibility.** In its ANOPR, "The PUC notes that some of these topics may be appropriately resolved in regulations while others might be more appropriate for policy statements, contained in electric distribution company ("EDC") tariffs, or adjudicated on a case-by-case basis, and the PUC specifically seeks comment on how to best administer each topic." (ANOPR at 1) Some issues associated with implementation of Order 2222 will require regulatory changes, as indicated below. Notably, interconnection rules must be updated. However, the Company supports the Commission in considering what other topics are best served through Policy Statements, Implementation Orders, or other Commission guidance. To the extent possible, flexibility will be required to "future-proof" Commission actions,

considering the evolving nature of DERs. Regulations will need to accommodate the technical capabilities of EDCs today, while recognizing future advancements. Additionally, DER penetration levels may change as technologies advance and cost-effectiveness shifts. The Commission is correct in considering which elements require the certainty of established rules, versus the flexibility provided by other mechanisms that can be more easily changed, as needed.

2. **Preventing double counting.** The Company continues to believe that the potential for double counting and double compensation for generation connected behind the retail meter is a significant risk which Commission regulations must address. The Company discusses this topic in detail in response to Section G below.

3. **Ensure PUC jurisdiction over aggregators.** EDCs cannot be put in the position of policing aggregators. The Public Utility Code requires that the Commission "shall ensure continuation of safe and reliable electric service to all consumers in the Commonwealth." (66 Pa.C.S. Section 2804) The Commission has jurisdiction over entities that purchase electric energy and take title to that energy as an intermediary for the sale to retail customers. (66 Pa.C.S. Section 2809) Under the ANOPR, the Commission envisions DERAs acting in an aggregator role to manage and package DER output for participation in markets. It is Duquesne Light's position that the Commission must have jurisdiction to protect Pennsylvania energy consumers. If the Commission does not have clear authority to exercise jurisdiction through existing legislation and regulations, enabling legislation must be pursued.

4. **Ensure EDCs can recover the costs associated with implementation.** EDCs will be required to incur significant costs including, but not limited to, upgrades to interconnection processes; establishing new processes and systems to review and validate aggregations; metering and billing system upgrades; and information technology ("IT") integrations, to effectively implement Order 2222. The Commission must ensure these costs are recoverable in a fair and equitable manner.

5. **Customer understandability.** Duquesne Light has observed that many customers, including those who are customer-generators, do not have a firm understanding of how net metering works today. For example, many customers with rooftop solar question why the production data shown by the solar system does not match with the credit on their EDC bill, because they do not understand that energy generated is first used on-site, with only the excess generation being exported to the grid and credited to their bill. This knowledge gap and opportunity for misunderstanding will only grow with the implementation of Order 2222. The PUC must enact policies and guidance to limit the potential for customers to be confused or, worse, misled by disreputable salespersons. Additionally, the Commission must recognize that the EDC will likely be tasked to help educate and respond to questions from its customers, which will potentially increase costs.

Duquesne Light commends the PUC for initiating this proceeding now. Although some implementation details are awaiting action from PJM and FERC, the complexity and importance of this subject calls for urgent action. The ANOPR requests feedback on several specific topics. The Company provides its input on each of those, as follows.

A. Changes To Distribution DER Interconnection Rules

As stated above, the Company believes interconnection rules need to be updated to address application fees for DERs and DERAs; increase clarity around treatment of batteries; provide more specificity on who is responsible for costs of upgrades; and to clarify aspects of the study process. While Duquesne Light is supportive of efforts to find alignment between different interconnection types, it emphasizes that interconnection rules must prioritize safety and reliability of the grid, regardless of the type of interconnection. The Company addresses each of the Commission's questions on this topic as follows:

- *How will Component DERs previously not subjected to interconnection (energy efficiency and demand response resources) be integrated into an aggregation?*

  Because these resources (energy efficiency and demand response resources) constitute a reduction in load, rather than an injection of energy, the Company does not anticipate significant new requirements for these types of resources. As the number of these resources increases, the EDC will need additional visibility into when load reductions are occurring.

- *In consideration of future technology advancement through distributed energy resource management systems (DERMS) and other technologies that may allow for utility direct control and overrides, should approval of interconnection requests extend to consideration of an option for firm and non-firm approval categories to reduce the need for system upgrades?*

  Duquesne Light appreciates that this question is seeking creative opportunities to support further integration of DERs. Currently, the Company does not have the necessary technology tools to utilize firm and non-firm approval categories. While there may be opportunity to explore such a consideration in the

future, at this time the additional complexity introduced by such an option would outweigh any potential benefit.

- *Under what conditions will direct control vs. monitoring be required?*

  Only the EDC can monitor and manage the distribution grid. EDCs need the flexibility to define those conditions based on their individual technology and abilities. These conditions may change over time. The Commission must recognize that each EDC's distribution grid is designed and operated differently, and not all EDCs have the same technology capabilities. At a minimum, conditions may include size of the DER, constraint of the grid at the interconnection location, and volt/var control.

- *How should the DER aggregation review process differ for different use cases, market services, DER compositions or grid conditions?*

  The DER aggregation review process should vary based on the factors listed. The level of review should be commensurate to the level of impact the aggregation will have. Duquesne Light believes the PUC should define a review process that is consistent across the state, while providing EDCs a degree of flexibility to determine what needs to be studied.

- *How should load assumptions be adjusted to accommodate the use of load-modifying resources?*

  Duquesne Light interprets "load-modifying resources" as energy efficiency and demand response specifically. Today, the Company plans its distribution grid for the maximum potential energy needs in its service territory (i.e. the "worst case" scenario). It does not currently integrate projected efficiency,

demand response, or other interconnected resources because, as customer-owned resources, the Company does not have certainty that the resources will be available to support the distribution grid when needed. Unlike wholesale markets, where resources may face stiff penalties if they are not available when called upon, historically net metered DERs at the retail level have not had an obligation to operate at a given time. Under Order 2222, the EDC is not responsible for dispatch and would be unable to rely upon a resource; thus there is a risk to reliability in including these resources in distribution system planning in a meaningful way at current penetration levels.

- *What data will DERAs need to provide to EDCs and to what extent can this leverage existing PJM registration data requirements? How should these data be documented?*

As of the time of filing, PJM's registration data requirements have not been determined, and thus it is impossible to identify what additional data may be needed. The Company anticipates some additional information beyond what is included in the PJM registration will be needed to complete its interconnection review. Duquesne Light believes it is important to build as much consistency as possible between the PJM and EDC processes.

- *Where should automation versus manual coordination and communication between EDCs, the DERA and PJM be required? How should the PUC ensure that the EDC DER registration approval process is efficient to consistently meet PJM's 60-day timeline and avoid potential "over-registration"?*

Duquesne Light anticipates that some processes may initially be completed manually and be gradually transitioned to automated processes as new technology solutions are developed. The ability to accommodate automation may

differ between EDCs, and thus the Commission may consider offering guidance, but should avoid one-size-fits-all requirements. While automation offers significant benefits, implementation may need to be gradual to balance the costs to customers.

Regardless of whether processes are automated or manual, meeting PJM's 60-day timeline will largely depend on the ability to get complete and accurate data from the initial application.

- *How should the PUC clarify and harmonize the relationship between DER interconnection under PUC regulations with DER interconnection under PJM's small generator interconnection rules, if needed?*

Duquesne Light understands that aggregations may include DERs that are currently interconnected to the distribution system via state interconnection and net metering rules, as well as DERs that are interconnected following PJM's small generator interconnection rules. While the Commission's jurisdiction only extends to those DERs participating in Pennsylvania retail programs, efficiencies may exist if interconnection rules are aligned to the extent possible. However, ensuring the safety and reliability of the distribution grid should be the primary focus of Pennsylvania interconnection rules.

The Company also asks that the PUC act to mitigate potential risk to EDCs by providing protection against liability for any delay caused to market participants by required system upgrades. Ideally, any needed upgrades will be identified during the initial interconnection process before the DER is offered into any PJM market. However, there may be cases where a

customer-generator may increase capacity without informing the utility, or where a DER is interconnected without previously having gone through the EDC interconnection process. In those cases, registration at PJM may alert the EDC to newly study the resource, which could result in necessary system changes to accommodate the generation. In those cases, the EDC, which is acting to protect the reliability of the system for all users, should not be held accountable for any market delays. Additionally, EDCs cannot be held accountable for the inability of a DER to participate in the market due to diminished line capacity, for instance, during repairs or storms.

Finally, it is paramount that the PUC exercise its full authority over the electrical distribution system to ensure that Order 2222 does not have unintended impacts to reliability or safety. The PUC has primary jurisdiction over the safety and reliability of electric distribution in Pennsylvania, regardless of the market in which interconnected DERs participate.

B. Changes To Metering Requirements

As the energy system evolves to include increasing amounts of distributed energy resources, availability of accurate data on energy generation and use becomes even more important. As a preliminary matter, Duquesne Light believes an EDC customer-generator should have a single point of interconnection to the distribution grid, with an EDC bi-directional meter. This bi-directional meter can be configured to provide information on electricity delivered from the grid and electricity exported to the grid. An EDC should have flexibility to implement additional metering guidelines or requirements such as to differentiate between the DER and retail load when visibility is required to maintain reliability or support system planning needs.

If DERAs desire more granular data than what is provided by the EDC, they should bear the responsibility and cost for installing required metering technology, as well as any associated

services to be provided by the EDC. The cost of any metering device should be borne by either the participating DER or the DERA, as the cost is solely driven by wholesale market participation.

While the EDC should not be required to provide additional metering, it should not be prohibited from doing so if necessary to ensure an accurate retail bill or support reliability, as discussed in more detail below.

- *How should interconnection regulations evolve to ensure alignment between EDC and PJM telemetry and metering to facilitate consistency and avoid extensive telemetry differences between DERA requirements and retail DERs?*

  The current interconnection regulations at 52 Pa. Code § 75, Subchapter C should be updated to reflect additional complexities and considerations associated with DERs participating in wholesale markets; however, it may be premature to suggest specific changes at this time. In addition to updating regulations, the Company recommends the Commission utilize implementation orders or a similar mechanism that is more easily updated as experience is gained and technology evolves.

- *Should the PUC facilitate device-level metering and if so, how?*

  For customer-generators who have multiple component DERs behind the meter, the EDC should not be required to submeter each individual component unless it is necessary to accurately determine the customer's retail bill or to support reliability. For example, if a customer-generator has multiple DERs, some of which are participating in wholesale aggregations and some of which are not, it may be necessary for the EDC to have generation data specific to those resources

participating in the wholesale market. To that end, the EDC should not be prohibited from instituting additional metering guidelines or requirements such as metering individual DERs. The Company can envision increasingly complex customer configurations utilizing multiple distributed generation systems, storage, EVs, and smart electric appliances that participate in multiple retail and/or wholesale programs or rates. In these instances, it may be helpful or necessary to have data on individual components to ensure accurate retail billing.

As stated throughout the document, the Commission must avoid being overly prescriptive to ensure regulations and guidelines allow for future evolution. Accordingly, the PUC may consider holding one or more working group meetings on the topic of metering and providing clarity around metering responsibilities via an implementation order or similar mechanism.

C. Cost Allocation Issues For Facilities Allowing The Interconnection Of DERs

The subject of cost allocation is among the most significant issues associated with Order 2222 implementation. The Commission must ensure that DER participation in wholesale markets does not lead to unreasonable cost shifting among consumers. The Company addresses the ANOPR's individual questions as follows:

- *How will DERA market participation impact retail rates?*

  It is difficult to predict the impact of DERA market participation on retail rates. When possible, any costs associated with a specific aggregation, such as interconnection and aggregation review, necessary system upgrades, or metering configurations, must be the responsibility of the individual DER or DERA. However,

some costs will not be easily assigned to a specific aggregation or DERA and may need to be socialized across all customers.

Theoretically, there could also be cost savings through avoided new generation, assuming DERs will prevent the need for construction of new generation, and assuming traditional generation has a greater cost per kW than distributed generation. However, these savings may not be realized until the market matures, which may be several years from now. As discussed in greater detail in response to Subsection L: Distribution Level Benefits, the ability of grid operators to rely on these distributed resources will also vary based on whether they are predictable, as well as whether they can they be managed.

- *What cost recovery guidance, if any, is needed by EDCs for investments that may support both transmission and distribution?*

The Commission must ensure that costs are recoverable in a timely fashion. Duquesne Light recommends that this is an area to seek consistency, to the extent possible, with other PJM states. Regardless of alignment with other states, cost recovery guidance should be very clear to provide transparency to all parties and to prevent future legal challenges.

- *How should EDCs distinguish cost allocation between grid modernization, general DER costs, and DERA-specific costs?*

Duquesne Light recognizes that some costs associated with grid modernization are investments the Company may need to make regardless of Order 2222; however, the speed at which these system upgrades must be made to allow for Order 2222

implementation will be far greater than what the utility would have undertaken on its own. In general, the Commission is aware of the EDC's planned investments, either through its Commission-approved Long-term Infrastructure Improvement Plan; through discussions held with staff, such as the annual reliability meetings or EDC briefings; and through EDC proceedings, such as distribution rate reviews.

In addition, some costs will be necessitated solely by Order 2222. For example, there will be costs associated with billing system upgrades and meter reconfiguration that would not be incurred absent aggregated DER wholesale market participation.

- *What cost recovery mechanisms should be used (upfront charges, usage charges, rates)?*

EDCs should have the ability to charge a DERA directly for any costs that can be assigned to a specific aggregation. Additionally, EDCs should continue to have the ability to charge a DER directly for any costs that can be assigned to a specific interconnection.

For costs to be recovered via distribution rates, the Company recommends the Commission consider creating a regulatory asset to allow these costs to be deferred for consideration in an EDC's next base rate proceeding, or a rider that would allow for timely recovery.

Utilizing a rider to recover these costs may be more cost-effective for the customer as it allows for more timely recovery, whereas a regulatory asset continues to incur interest between rate cases. Specifically, substantial IT costs are expected to be incurred, which will require a significant initial investment with a short

depreciation window. Because rate cases do not occur on a regular basis, there is a risk of the Company investing significant capital that is not fully recoverable.

- *What is the interplay between the direct procurements aspects of EDCs' default service plans and an EDC's costs to administer DERA participation in wholesale markets, if any?*

  Duquesne Light believes the intent of this question may be to suggest that EDCs will procure less energy under default service because of the energy injected into the grid by DERAs; however, the Company does not see any direct correlation or interplay between these two activities. While the electrons produced by DERAs will be directly flowing onto Duquesne Light's system, the energy will be sold into PJM's wholesale markets. Similarly, Duquesne Light's third-party suppliers under its default service auction will continue to procure energy through the PJM markets. For these reasons, the Company opines there will be little to no effect or interplay between Duquesne Light's costs for default service procurement and the costs to administer DERA participation.

D. Adjudication Of Disputes Regarding the Registration of DERs

The Company initially notes that the potential for disputes can be minimized by establishing a transparent process for review of DERs and aggregations, as well as clear requirements for data. The ANOPR cites PJM's DERA Participation Model ("DAPM") in explaining that disputes regarding DERA registration may be addressed by the PUC or FERC, depending on the jurisdictional nature of the dispute (ANOPR at 28). Duquesne Light supports the PUC's active engagement in dispute resolution for matters of state jurisdiction. At this time, the Company is not recommending specific changes to the Commission's existing dispute

resolution regulations at 52 Pa. Code Chapters 1 (relating to rules of administrative practice and procedure), 3 (relating to special provisions), and 5 (relating to formal proceedings). However, as more details regarding implementation are finalized, it reserves the right to augment this position.

E. Management Of Distribution Utility Overrides Of DERs To Maintain Reliability, And Disputes Arising Therefrom

Duquesne Light emphasizes the importance of reliable service to electricity end users. Advancing clean energy, including distributed DERs, is a laudable goal and aligns with Duquesne Light's corporate vision of a clean energy future for all. Implementation of Order 2222 potentially contributes towards this goal. The Commission must ensure, however, that implementation occurs in such a way that does not negatively impact reliability.

- *How should the distribution override process align with market bidding windows?*

  The need for distribution overrides will often be independent of the market bidding windows, in order to maintain safety and reliability after unplanned system events (storms, outages, equipment failures, etc.). Planned outages that are necessary for maintenance and repairs may be able to accommodate market timing. However, when reliability or safety reasons warrant, an override can be triggered by an EDC at any time. The PUC must ensure that EDCs have the authority to override DERs when the situation dictates, such under emergency circumstances.

- *What EDC "real-time" update and override requirements should be addressed in DERA agreements to ensure the reliability and safety of the grid?*

  The PUC must consider the technology available to Pennsylvania EDCs. For larger generation sources, there may be an opportunity to remotely disconnect. However,

Duquesne Light does not presently have the ability to communicate directly with small DERs, nor does it currently have the technical capability to override a DER. The Commission must ensure that any override policies or procedures can serve EDCs today as well as in the future as technology evolves.

EDCs need full autonomy to make decisions to maintain system safety and reliability. Interconnection agreements should be updated to include clear language that the DERAs must adhere to the overrides initiated by the EDC. The agreements should also include communication protocols for the physical steps and/or technology required to trigger the overrides. For example, the agreements should specify how the EDC should notify the DERA and/or DER owner about an override. The EDC should not need to receive acceptance from the DER or DERA to initiate the override; EDCs must have the ability to take immediate action with respect to removing DERs from the grid in response to a safety or reliability concern without consequence. The DERA should positively affirm to the EDC that any impacted resource has been disconnected without intentional delay. If EDCs are to work through the DERA, stringent rules must be established to ensure DER compliance with any override. Any rules or guidance should clearly define "override" and address scenarios where an emergency shut-off is required, as well as those where the EDC can follow a notification process. It must be made clear that the EDC is held harmless if the DERA fails to communicate information to the component DERs.

Finally, agreements between the DERA and EDC should include technical requirements set by the EDC to which DERAs must adhere. These technical requirements

are not presently known and will evolve over time; however, Duquesne Light reserves the right to provide more detail on this topic in future public comment.

F. Protection Of DER Owners From Unfair Trade Practices Or Excessive Risk In The Wholesale Markets

The Commission must establish practices to protect DER owners, many of whom may be residential or small business customers. Duquesne Light agrees with the ANOPR's summary of EDC stakeholder meeting feedback on this topic: "an EDC should not be in the role of policing DERAs." (ANOPR at 34) However, because the EDC is the direct point of contact for many customer-generators, the Company expects to receive questions and concerns regarding DERA marketing and practices. For this reason, it supports the recommendation from the DERA stakeholder meeting calling for PUC licensing and ensuring the PUC has control over how DERA's obtain customer consent. (ANOPR at 35)

The Commission must ensure it has authority to license DERAs, to enforce any rules or regulations, and to assess penalties for non-compliance. The PUC seeks stakeholder input on its existing sources of authority to oversee DERAs, such as the Unfair Trade Practices and Consumer Protection Law or the Electricity Generation Customer Choice and Competition Act . The Company has initial concerns about extending electric generation supplier ("EGS") licensing to cover DERAs. DERAs are not providing the same service to customers as an EGS, and the potential risks or benefits are not the same. Unique licensing and rules specific to DERAs are needed.

The Commission must consider how DERAs demonstrate customer consent to enter an aggregation, how customers leave an aggregation, how a customer restricts data access, and the

actions necessary for when a customer moves or is disconnected from utility service. This is not an exhaustive list of considerations that should be addressed by the Commission.

The Company anticipates establishing a Commission-approved tariff to govern the relationships with DERAs.

G. Prevention Of Double Compensation Or Double Counting Between Retail And Wholesale Market Participation, Including Rules Governing DER Owners' Ability To Switch Between Retail And Wholesale Market Participation

The PUC must ensure DER owners are not compensated more than once for a single service provided. The ANOPR cites input received at the EDC stakeholder meeting:

> • The determination of whether net metering customers can participate in a DER Aggregation Resource should be left to the PUC, not PJM, as net metering rules vary by state and may change over time.
>
> • The PUC should consider rules for when and how often a customer can switch between net metering and participation in a DER Aggregation Resource.
>
> (ANOPR at 38)

The ANOPR further reports that at the DERA stakeholder meeting, it was suggested the PUC should state "to what extent the resources could participate as wholesale and retail simultaneously." As described in further detail below, as it applies to net metering, the Company recommends the Commission restrict DERs from offering any services in the wholesale market that they are compensated for in the retail market.

- *Does the PUC have authority to decide whether to permit net metering customers to participate in DERAs, noting FERC's statement that "under a [RERRA]'s jurisdiction over its retail programs, such a [RERRA] is able to condition a distributed energy resource's participation in a retail distributed energy resource program on that resource not also participating in the RTO/ISO markets"?*

Yes, the PUC has authority to restrict customer-generators from participating in net metering if they are participating in PJM wholesale markets. Order 2222 provides that "a regulatory authority is able to condition a distributed energy resource's participation in a retail distributed energy resource program on that resource not also participating in the RTO/ISO markets."[2]

Under Pennsylvania's net metering rules, customer-generators are compensated at the full retail rate. The PUC, in comments filed at FERC in March 2022, explained that "a generator that provides energy as part of a net metering program is compensated through a fully bundled retail rate, which includes compensation for services other than energy, such as capacity and ancillary services."[3] The Commission went on to explain that "the PAPUC determined that 'full retail value' is the fully bundled retail rate, which includes generation, transmission, capacity, ancillary services and distribution."

Thus, a Pennsylvania customer-generator participating in net metering is already being compensated for all services it could offer into the PJM wholesale market. For this reason, net metered customer-generators must choose to participate in either one or the other and cannot simultaneously participate in both.

To appropriately safeguard Pennsylvania customers, the PUC should amend interconnection regulations to restrict eligibility for net metering to those customers who are not being compensated for any service provided by the DER in another market.

[2] *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 172 FERC ¶ 61,247 (2020) at 51

[3] PJM Interconnection, L.L.C., 182 FERC ¶ 61,143 (2023), n. 243, referencing comments made by the Pennsylvania Public Utility Commission (PAPUC) March 31, 2022 Comments at 6.

- *Assuming the PUC does have requisite authority, should the PUC permit net metering customers to also participate in DERAs at the same time?*

  For the reasons stated above, Duquesne Light believes the PUC must act to restrict customer-generators from participating in net metering and a DERA at the same time.

- *Assuming the PUC does have requisite authority, should the PUC develop rules for when and how often a retail customer may switch between met metering and DERA participation?*

  Yes, Duquesne Light believes interconnection regulations should be updated to clearly define the process for switching between net metering and DER aggregation, including the frequency at which this can occur. The Company recommends restricting switching between programs to once per year. The Company believes switching between programs will require administrative review, technical studies manual meter configurations, and IT change, and frequent switching will increase distribution costs as the utility spends time and resources enabling the switch. Restricting switching to once per year would appropriately balance customer choice with managing distribution costs. It is noted that there is precedent for restricting switching. For example, in Duquesne Light's Commission-approved electric vehicle time-of-use ("TOU") program, customers who enroll in TOU, then decide to switch back to default service, are prohibited from re-enrolling in the TOU program for one year. Similarly, the PUC should restrict customer-generators who have enrolled with a DERA from switching back to net metering only once in a calendar year.

  Duquesne Light also recommends the Commission establish a specific time of year when customer-generators can switch from an aggregation back to net metering.

Having an annual window when customers can enroll is a familiar concept to Pennsylvania consumers, similar to "open enrollment" for health care benefits. The Company initially recommends setting the enrollment window for the two weeks following May 31st, which is the annual "true up" date for net metering customers to be paid for energy produced in excess of what was consumed over the past year.

Similar to open enrollment for health care benefits, it is anticipated that new customer-generators would not be restricted to the annual window, but rather could apply for net metering at the time they interconnect. It is only existing customer-generators who are seeking to switch between programs that would need to wait for the annual window.

Additionally, net metering regulations should be amended to account for existing DERs that are switching back to net metering from a DERA. It is anticipated that these resources would likely qualify for a less-stringent review than a brand-new resource interconnecting for the first time; however, the regulations will need to account for this variance, so that EDCs have a more streamlined option, when appropriate, to improve efficiency. Nevertheless, EDCs must retain the ability to provide a rigorous review if needed, such as if the DER has materially changed since initial interconnection or otherwise poses a potential safety or reliability impact.

An additional, important consideration not necessarily captured by the ANOPR questions is how to prevent double counting of energy generated by the DER that is used on-site. For example, for most solar customer-generators, the generation system is directly connected to the home or building, behind the retail meter, and energy generated will first serve any on-site load before feeding onto the distribution system. Even if a customer-generator is not net metered,

there is potential for double-counting if the DERA bids the full capacity of the system into the market, not accounting for the amount that is feeding into the premise and is not available to the wholesale market. Duquesne Light believes there is a potential risk for this generation to off-set the customer's distribution bill, while also being compensated in the wholesale market. The Company believes solving this issue is among the most important challenges associated with Order 2222 implementation. The Company asks that the PUC provide guidance on this potential risk and options to mitigate.

H. Any Necessary Electronic Data Exchange Revisions

Duquesne Light supports the use of Electronic Data Interchange ("EDI") to the extent possible to enable efficient, accurate, and automated information exchange. The PUC should provide specific guidelines for how data should be delivered, similar to the existing *Standards for Electronic Data Transfer and Exchange Between EDCs and EGSs* (Docket No. M-00960890 F0015). The Company advocates for a daily transfer of EDC data to the DERA, as is currently the practice with EGSs. Data should be provided in 15-minute intervals. Increasing the frequency of data pulls and/or the granularity of data provided could incur costly and time-intensive system upgrades. To the extent the Commission wishes to expand these parameters, it must provide time for utilities to implement changes, as well as provide for cost-recovery certainty.

- *What DERA cybersecurity items require further evaluation?*

  Cybersecurity is of paramount importance for an entity that interfaces with the electricity system, including DERAs. The Company provides a more detailed response under Section K: Cybersecurity Considerations.

- *What role will advanced metering infrastructure (AMI) data play in operational coordination?*

Existing AMI can provide 15-minute meter data through a daily data transfer. At this time, the Company believes this data is sufficient for wholesale market participation, but an EDC should have flexibility to implement additional metering requirements.

- *How should the PUC ensure that processes are in place for efficient data exchange among and between Component DERs, DERAs and EDCs for customer authorizations?*

The Company believes the existing Electronic Data Exchange Working Group ("EDEWG") process should be utilized to the extent possible, which could result in standards to support consistency across utilities where feasible. The Commission must recognize, though, that each utility has different technology capabilities, and that technology is always evolving. This topic is a place where guidelines, which can more easily be updated, may be more appropriate than strict requirements.

I. Small Utility Opt-in Procedures

Duquesne Light does not have a position on how the Commission addresses small utility opt-in procedures but reserves the right to opine on this matter in the future.

J. Potential PUC Oversight Of DERAs

The Company feels strongly that the PUC must exercise its jurisdiction over distribution operations to provide oversight of DERAs. At a minimum, the Commission should require a state-level licensing process, akin to that utilized for electricity generation suppliers and natural gas suppliers. The licensing process should ensure DERAs have appropriate qualifications, cybersecurity protections, and any necessary insurance and bonding. Additionally, the

Commission should establish marketing regulations, including penalties for violations and potential license revocation, if warranted.

EDCs cannot be expected to police the actions of DERAs. At a minimum, PUC oversight of DERAs should address the following considerations:

- How does the EDC verify a customer's authorization to be part of an aggregation?
- How does the PUC ensure DERAs maintain valid points of contact so that the EDC can communicate with an aggregator when needed, such as in the case of a planned outage?
- What compliance reporting requirements should be mandated to ensure DERA compliance with all operational, safety, and consumer services requirements?

K. Cybersecurity Considerations

Introducing additional entities interconnecting with EDC systems necessarily introduces cybersecurity risk. Mitigating that risk is of utmost importance. At a minimum, the Commission should extend its existing self-certification regulations at 52 Pa. Code § 101 to apply to DERAs. The regulations are the subject of a separate ANOPR at Docket No. L-2022-3034353. Under the existing regulations, covered entities must annually self-certify that they have adequate and appropriate cybersecurity, emergency response, business continuity, and physical security plans. The Commission should also seek to include DERAs in mandatory reporting regulations regarding any potential breach which could impact EDC systems or result in the release of customer data.

Duquesne Light believes that aggregators should additionally be required to align with guidance established by the National Institute of Standards and Technology (NIST), and other applicable standards.[4]

Finally, as part of new regulations recommended by the Company under Section F: Protection Of DER Owners From Unfair Trade Practices Or Excessive Risk In The Wholesale Markets, the Commission should establish minimum penalties that apply to DERAs for cybersecurity violations.

L. Distribution Level Benefits

Duquesne Light seeks to enable a clean energy future for all and recognizes that greater use of distributed clean energy resources will be a component of the future grid. It recognizes the benefits of DERs, regardless of whether they are operating individually or as part of an aggregation, which could include reducing carbon emissions, providing frequency regulation and volt/VAR support, reducing line losses by siting generation closer to load, and potentially reducing the need for capacity reinforcements. The Company notes that these potential benefits, as well as any potential costs, can vary greatly based on location of the DER.

The Company has no existing data or evidence to demonstrate that distribution level benefits of DERs are greater when operating as part of an aggregation, as compared to independent operation. The Company notes that potential benefits of DERs are maximized when the EDC has the ability to manage the DER when needed. At a minimum, EDCs must have

[4] Specifically, the NIST Cybersecurity Framework for Securing Critical Infrastructure and NIST Special Publication 1800-32A Securing Distributed Energy Resources should apply to DERAs. Duquesne Light also points to the National Security Memorandum on Critical Infrastructure Security and Resilience, April 30, 2023 https://www.whitehouse.gov/briefing-room/presidential-actions/2024/04/30/national-security-memorandum-on-critical-infrastructure-security-and-resilience/ and the National Association of Regulated Utility Commissioners (NARUC) *Cybersecurity Baselines for Electric Distribution Systems and DER* https://www.naruc.org/core-sectors/critical-infrastructure-and-cybersecurity/cybersecurity-for-utility-regulators/cybersecurity-baselines.

override authority when necessary to protect the reliability and safety of the distribution system. Additionally, as the distribution grid operator, an EDC needs real-time visibility into DER output. For example, a DER could reduce the potential for overloads on the circuit at which it is interconnected. To maximize this potential benefit, the EDC will need to understand forecasted DER output to determine the extent to which the DER can address overloads, as well as additional actions needed. Additionally, EDCs will need the ability to define DER voltage schedules and reactive operating parameters to support stable voltage on the distribution system.

The Commission should recognize that technological capabilities differ between EDCs today. However, any rules or guidance adopted through this process should enable a future state where EDCs are in a position to manage DER to maximize potential benefits to all grid users.

M. EDCs Acting As DERAs

The Commission should consider whether EDCs are limited to acting as a DER aggregator only in its own service territory or over a broader footprint, as well as how any earnings would be treated for accounting purposes. There can be benefits to EDCs acting in an aggregator role. Duquesne Light encourages the PUC to retain flexibility around this topic and believes that any potential for conflict of interest can be mitigated.

N. Billing Issues

Duquesne Light agrees with the sentiment expressed in the ANOPR that "[e]xisting billing structures are not sufficient to deliver to a customer who owns a participating DER a synopsis of what happened in both the wholesale and retail markets." (ANOPR at 45) However, the Company does not believe that the EDC bill should be changed to display wholesale market

activity. Doing so would incur significant costs without adequately addressing customer confusion. However, the Company recognizes that there may be a need to "true up" data in order to provide an accurate retail bill, with associated costs. For any billing changes contemplated, it is important to look for opportunities to prevent customer confusion by keeping the retail bill and a statement for wholesale activity separate, to the extent practicable.

Additionally, in the DERA stakeholder meeting, "It was requested that the PUC should ensure that all facets of the DERA billing paradigm are made transparent to ensure customers understand it." (ANOPR at 45) The Company agrees that there will need to be transparent information exchange between the DERA and EDC. The PUC has clear jurisdiction over EDC billing; it is less certain the degree to which the PUC has authority or responsibility regarding DERA billing practices. At this time, the Company is not prepared to make a recommendation of whether or how existing billing regulations may need to be updated as a result of Order 2222. As the Commission continues to explore this topic, Duquesne Light encourages it to remember that all companies have different billing and IT systems. Today, some billing processes are completed manually. For any billing changes necessitated by Order 2222, the PUC must ensure EDCs have adequate time and resources to make those transitions.

O. Equity Concerns

The most important equity consideration is the potential disparity between which customers benefit from DER aggregation and participation in wholesale markets, compared to which customers pay for associated costs. This concern cannot be addressed as a standalone topic but must be a consideration across all aspects of Order 2222 implementation.

IV. CONCLUSION

As the Commission has recognized in its ANOPR Order, integration of FERC Order 2222 through PUC jurisdictional assets raises many issues. Duquesne Light submits these initial Comments to address the issues identified by the Commission in its Order. It is critical that all stakeholders recognize that the process of overseeing DER integration with wholesale markets will likely raise many unforeseen issues that will need to be addressed over time. The Company supports the goals of Order 2222 and looks forward to working with the stakeholders to ensure Duquesne Light's customers have the opportunity to benefit from these initiatives.

Respectfully submitted,

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