

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission	:
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Distributed Generation Valuation and Compensation Workshop	:
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COMMENTS OF COMMONWEALTH EDISON COMPANY

Commonwealth Edison Company (“ComEd”) submits these Comments in response to the solicitation by the Illinois Commerce Commission (“Commission”) relating to the March 1, 2018, Distributed Generation Valuation and Compensation Workshop (“Workshop”). Representatives of ComEd attended that Workshop and will continue to participate in subsequent Workshops and other activities on this important topic.

I. Introduction

The Future Energy Jobs Act (“FEJA”) requires electric utilities serving more than 200,000 customers in the State of Illinois to request Commission approval of a tariff to provide rebates valued at \$250 per kilowatt of nameplate generating capacity, measured as nominal DC power output, to certain customers.¹ The aforementioned rebate value is fixed until the Commission approves subsequent tariffs or tariff revisions pursuant to the findings of an investigation into an annual process and formula for calculating the value of distributed generation to the distribution system at the location at which it is interconnected.² ComEd commends the Commission for partnering with the U.S. Department of Energy and the Pacific Northwest National Laboratory (“PNNL”) to engage interested stakeholders to review, at this early stage, options being considered in other states for pursuing distributed generation valuation

¹ 220 ILCS 5/16-107.6(b)-(c) and (f).

² 220 ILCS 5/16-107.5(e).

methodologies, and for providing a forum for Illinois stakeholders to comment on PNNL's initial Whitepaper³.

Informed by its unique perspective and the practical experience gained from its long-standing role as Illinois' largest distribution utility and the builder, owner, planner, and operator of the distribution network covering northern Illinois, ComEd recognizes the critical role it is to play in proceedings related to distributed generation. ComEd is active in supporting the integration of distributed generation technology into the distribution system, and it is already developing and implementing a series of demonstration projects meant to test various distributed generation use cases such as storage for grid support, non-wires alternatives, renewables integration, and microgrid operation. ComEd appreciates the opportunity to offer these Comments for Commission, Commission Staff, and other stakeholders' consideration. These Comments reflect ComEd's initial perspectives on the following three topics:

1. The General Assembly's guidance within FEJA for the Commission's future investigation into the valuation of distributed generation in Illinois;
2. The eight questions posed by the Commission for consideration during the Workshop proceeding; and
3. The Illinois-specific portion of the PNNL Whitepaper.

ComEd recognizes that these Workshops are intended engage interested stakeholders and help develop options for the separate and comprehensive effort to discern and shape the future of distributed generation valuation in Illinois. Through these Comments, ComEd's intent is to help inform the transition to an appropriate regulatory construct for future DG rebate amounts reflecting the value of the underlying distributed generation to the distribution system.

³ AC Orell, *et al.*, Distributed Generation Valuation and Compensation, <https://www.icc.illinois.gov/Electricity/workshops/DistributedGenerationValuation.aspx> (Pacific Northwest National Laboratory, Feb. 2018) ("Whitepaper").

II. FEJA

FEJA requires that the distributed generation rebate valuation formula approved by the Commission “reflect the value of the distributed generation to the distribution system at the location at which it is interconnected, taking into account the geographic, time-based, and performance-based benefits, as well as technological capabilities and present and future grid needs.”⁴ In particular, ComEd believes that distribution system level distributed generation compensation mechanisms should adhere to certain guiding principles, including:

- **Objective cost/benefit analysis is critical.** Regulatory policy and structural change should be guided by unbiased, objective cost/benefit analyses that correctly reflect costs to distribution system consumers and the distribution system as a whole. Decisions about how to value and compensate distributed generation should be grounded in such cost/benefit analyses. Objective and unbiased cost/benefit analyses generate information indispensable to parties, facilitating decisions that benefit society.
- **Dynamic Efficiency and Management Flexibility Are Essential.** The final model adopted must allow utility management the ability to adjust to changing circumstances; support and encourage innovation; allow timely implementation of technological advances; promote continuous efficiency improvement; and support long-term value for customers.

Approaches to identify and quantify the value that distributed generation provides are still evolving. As PNNL states, “Certain value elements are difficult or impossible to quantify and most efforts to establish workable value of solar or value of distributed energy resource tariffs are emerging and nascent. Assessing locational and temporal value of distributed generation and

⁴ 220 ILCS 5/16-107.6(e).

applying that in compensation schemes is a new and emerging field of study being explored by a handful of research organizations and advanced states and utilities.”⁵ So, while distributed generation can provide value to the grid, FEJA correctly recognizes that care must be taken and DG rebate values account for their spatial and temporal contributions to the distribution system.

III. Commission’s Questions

The Workshop posed the following questions for consideration and comment by stakeholders. ComEd submits the following initial responses below to each of those questions.

- a. What’s the Illinois-specific context for distributed generation valuation and compensation that is the same as or different from other states?

An important Illinois-specific context to highlight is that, unlike several of the states reviewed in the Whitepaper, Illinois has successfully transitioned to an unbundled rate structure that more clearly identifies the specific costs of the generation, transmission, and distribution components of energy service for customers. Illinois is also a national leader in clean energy policy and distribution system design and development. Our statewide commitment to clean energy and distributed generation is embodied by our Renewable Portfolio Standard (“RPS”) and our Zero Emission Standard, provide long-term reliable support for clean energy resources.

- b. What approaches from other states may fit or not fit in Illinois and why?

Approaches that are not suited for retail open access states – wherein customers can choose their energy suppliers – will not function in Illinois. The same is true for approaches pursued in states in which the vertical integration of electricity supply, transmission, and distribution is the predominant utility business and regulatory model. The existing regulatory and market structures within Illinois provides consumers a variety of choices including self-generation, community supply, municipal aggregation, and retail supply choice through various

⁵ Whitepaper, at iii.

alternative retail electric suppliers. Strategies that do not leverage existing market structures or the proven ability of Illinois' utilities to integrate different supply and retail service offerings may unintentionally over or under compensate distributed generation owners for their facility. States such as California, Oregon, and New York are evaluating or have proposed new distributed generation valuation and compensation mechanisms, each jurisdiction includes different benefits and costs in its calculations, and quantification methods differ across the states. The different approaches employed by other states may be useful in determining the most appropriate approach for Illinois however care must be given ensure that DG rebate amounts reflect the value of underlying distributed generation to the distribution system. While we are still in the early stages of determining the appropriate approach, ComEd agrees that all distribution system level values, both positive (i.e., benefits) and negative (i.e., costs) should be considered in the distributed generation value calculation.

c. What can be gleaned from original FEJA language or other key policies about rebates and valuation objectives and perspectives?

According to FEJA, the rebates provided to distributed generation resources should reflect the value of the distributed generation to the distribution system. ComEd acknowledges that distributed generation installations may provide additional value for society. Present and future market mechanisms (e.g., renewable portfolio standards, wholesale energy and capacity markets, ancillary service markets, tax incentives) may provide opportunities for distributed generation to be compensated for values beyond the value the particular resource provides to the distribution system.

d. What is the relationship to the valuations required by the Adjustable Block Program found in Sections 1-75(c)(1)(K) and (L) of the IPA Act?

Certain distributed generation owners may receive compensation for environmental attributes their systems generate by selling renewable energy credits (“RECs”) to the Illinois utilities for RPS compliance. The Illinois Power Agency (“IPA”) is required to set a pricing model for these RECs, publish the prices, and offer 15-year REC procurement contracts.⁶ The IPA has submitted its proposed pricing model and a Commission decision is expected in April 2018. The IPA has proposed to set the REC price based on all the value streams available to distributed generation owners (i.e. avoided energy costs, rebates, tax incentives) while including a predetermined return on investment that compensates distributed generation owners for the risks associated with ownership of the asset. This program is an illustration of one way in which distributed generation owners’ benefit from non-distribution system value streams.

e. What categories of data are or are not available that will influence value calculations?

As a threshold matter, the components of distributed generation value (both positive and negative) must first be identified in the context of Illinois before the determination as to what data is necessary to support the calculations that arrive at appropriate distributed generation values. Data must be robust enough to be applied to computations that calculate the value of the distributed generation to the distribution system as compared to the value of the traditional investment or operational costs it seeks to avoid, considering locational, temporal, and performance-based factors.

f. What are process suggestions or considerations for arriving at distributed generation rebates?

ComEd continues to believe that the process should be guided by a commitment by all parties to arrive at a transparent valuation methodology that is efficient, and equitable. Any methodology for distributed generation valuation and compensation should transparently send

⁶ 20 ILCS 3855/1-75(c).

clear price signals to developers and customers and consider administrative efficiently. ComEd believes that additional process suggestions or considerations are more properly reserved for subsequent proceedings, as those issues are beyond the scope of these Workshops.

g. Which value elements are most important for Illinois?

From a distribution system perspective, the valuation of distributed generation is determined based on the contribution the resource can make to meeting the needs of the distribution system (the “Three R’s”): 1) Real power - providing locational load (capacity) relief by reducing consumption during peak or providing redundancy for reliability and resilience; 2) Reactive power - absorbing/injecting reactive power to mitigate impacts of DER (e.g. voltage variations or over voltages); and 3) Reserves - providing standby capacity that can be used during emergencies.

Further, a methodology that values and compensates distributed generation for distribution system benefits should match the capability of the distributed generation to the present and foreseeable future needs of the distribution system. Such a methodology should calculate the locational and temporal value of DER to the distribution system, compare that value to the traditional distribution investment it avoids, allow for implementation across technologies and at various levels of aggregation and, critically, seek to maximize benefits for society.

h. What elements should be considered in differentiating distributed generation value by location?

The value that distributed generation provides to the distribution system varies with the location, time, and performance characteristics in comparison to the alternatives. Thus, any fair pricing or compensation for a distributed generation option should be evaluated based on the following:

1. *What* core product can the distributed generation provide – real power, reactive power, or reserve?
2. *When* can the distributed generation produce the core product?
3. *Where* on the grid is the distributed generation connected?

Thus, the capability of distributed generation is determined based on the contribution the resource can make to meeting distribution system needs through real power, reactive power, or reserve, but the value of that capability is a function of the ability to match it to locations where distribution system upgrades are needed, as well as the hours that are causing the need in that location.

IV. PNNL Whitepaper

The Whitepaper is a helpful guide for considering issues associated with distributed generation valuation and compensation, and it presents useful information about the approaches used in other states.⁷ It appropriately recognizes that states with regulatory and market structures as diverse as California and New York (and Illinois) are addressing common questions and issues in somewhat different ways, underscoring the fact that ComEd and other relevant stakeholders must consider factors specific to Illinois when developing the appropriate approach to value distributed generation in the state. The Whitepaper broadly considers FEJA as a whole when interpreting its directives for distributed generation rebate valuation. With these Comments, ComEd provides some needed clarification, and in so doing expresses its preliminary positions regarding the statutory directives for distributed generation rebate valuation, subject to further exposition at the appropriate time.

The Whitepaper reflects upon FEJA's declarations regarding the adoption and deployment of cost-effective distributed generation resource technologies and devices which can

⁷ ComEd's comments are not intended to imply that ComEd agrees with every potential element or approach to valuing distributed generation presented in the Whitepaper or employed in the various states.

stimulate economic growth and enhance the continued diversification of Illinois' energy mix, and these generic findings and declarations should be considered within FEJA's entire statutory construct. Specific statutory mandates within 16-107.6 of the PUA should guide valuation discussions and these generic findings may only be considered when there is vagueness or ambiguity within these statutory mandates. As described above, the General Assembly expressly states that the Commission's distributed generation rebate valuations should be based on the value of the distributed generation to the distribution system, thereby providing guidance for the value of the rebates. Environmental attributes are considered through other mechanisms within FEJA, such as the Renewable Portfolio Standard⁸ and the Zero Emission Standard.⁹

Additionally, while some may refer to the distributed generation rebate as a smart inverter rebate, ComEd notes that FEJA does not classify the rebate as such. In fact, FEJA requires utilities to offer rebates to certain customers, non-residential customers with distributed generation facilities installed prior to June 1, 2017 enrolled in net metering programs, without requiring a smart inverter. FEJA generally categorizes the rebate as a "distributed generation rebate" without providing specific guidance on the basis for the initial \$250 per kW in DC nameplate capacity. For distribution systems installed after June 1, 2017, FEJA specifies that the rebate eligibility criteria include interconnection via a smart inverter and utility operation and control of basic smart inverter functionality under the terms and conditions of the Commission approved tariff.

V. Conclusion

Effective valuation and compensation mechanisms for distributed generation will enable efficient allocation of resources to best improve the planning, operation, reliability, and security

⁸ 20 ILCS 3855/1-75(c)

⁹ 20 ILCS 3855/1-75(d-5)

of the distribution system for the benefit of Illinois customers, while limiting duplicative or unnecessary investments from either the utility or the distributed generation owners and developers. This requires the consideration of temporal and locational factors to accurately and objectively calculate values. Ultimately, the needs of all customers will be better served if the methodology balances efficiency, accuracy, fairness and transparency.

Ultimate adoption of the methodology for the valuation of distributed generation resources will be driven by many factors, and it will need to be implemented over a reasonable timetable. The collaboration among the Commission, DOE, PNNL, and stakeholders, and the resulting Workshops and Whitepaper, are useful milestones in advancing the discussion of distributed generation valuation in Illinois. ComEd looks forward to the second stakeholder Workshop, and the opportunity to provide additional comments in advance of the final report summarizing options and considerations for the future calculation of distributed generation values in Illinois.

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Respectfully submitted,
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