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**VIA ELECTRONIC MAIL**

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Acting Secretary of the Board  
Board of Public Utilities  
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P.O. Box 350  
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**RE:** In the Matter of the Modernizing New Jersey’s Interconnection Rules, Processes  
and Metrics (“Grid Modernization”)  
BPU Docket No. QO21010085

Dear Acting Secretary Diaz:

Enclosed please find Atlantic City Electric Company’s Comments on Modernizing New Jersey’s Interconnection Rules, Process and Metrics.

Consistent with the Order issued by the Board in connection with *In the Matter of the New Jersey Board of Public Utilities’ Response to the COVID-19 Pandemic for a Temporary Waiver of Requirements for Certain Non-Essential Obligations*, BPU Docket No. EO20030254, Order dated March 19, 2020, this document is being electronically filed with the Acting Secretary of the Board, the Division of Law, and the New Jersey Division of Rate Counsel. No paper copies will follow.

Thank you for your consideration and courtesies. Feel free to contact me with any questions or if I can be of further assistance.

Respectfully submitted,



Cynthia L.M. Holland  
Attorney at Law of the  
State of New Jersey

Enclosure

**In the Matter of Modernizing New Jersey’s  
Interconnection Rules, Processes, and Metrics  
 (“Grid Modernization”)**

**BPU Docket No. QO21010085**

**COMMENTS OF  
ATLANTIC CITY ELECTRIC COMPANY**



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## **I. GENERAL POLICY COMMENTS**

Atlantic City Electric Company (“ACE” or “the Company”) offers the following comments on the draft report, “Grid Modernization Study: New Jersey Board of Public Utilities” (“Draft Report”), which reviews distributed energy resource (“DER”) distribution grid interconnection policies and processes. The Draft Report and accompanying presentation, “Grid Modernization Study Draft Findings and Recommendations” (“Presentation”), include nine findings and recommendations, ranked in order of “implementation readiness” and “level of supporting evidence.”<sup>1</sup> The Company appreciates the work of Guidehouse on this significant undertaking and for the opportunity to provide comment on the draft recommendations prepared for the Board of Public Utilities’ (“BPU” or “Board”) Grid Modernization proceeding. The Company believes that this effort could lead to increased sharing of utility best practices on DER interconnection policies that will allow ACE and other New Jersey electric distribution companies (“EDCs”) to accommodate more DERs, while making the necessary system investments to maintain the safe, adequate, and proper electric service.<sup>2</sup>

As key elements of the Draft Report scope, ACE recognizes the urgent need for investment to enable more DER while simultaneously preparing for the transformational opening of wholesale markets to aggregated DER through Federal Energy Regulatory Commission (“FERC”) Order 2222. ACE is the tip of the spear on DER interconnection in New Jersey with the highest penetration of net energy metering (“NEM”) solar customers,<sup>3</sup> approximately 525 MW of DER,<sup>4</sup>

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<sup>1</sup> “Grid Modernization Study Draft Findings and Recommendations,” presented June 27, 2022. Available at Grid Modernization | NJ OCE Web Site ([njcleanenergy.com](http://njcleanenergy.com)).

<sup>2</sup> See N.J.S.A. 48:2-23 (referring to “safe, adequate, and proper” service).

<sup>3</sup> As of March 22, 2022 there were a total of 566,483 ACE distribution customers, excluding streetlighting customers. More than 44,000 of these customers participated in NEM representing 7.8% of ACE distribution customers.

<sup>4</sup> The total year-end 2021 clean energy DER interconnected is approximately 600 MW, inclusive of PJM interconnections. See Slide 2, ACE Stakeholder Presentation (January 14, 2022), *available at* Grid Modernization | NJ OCE Web Site ([njcleanenergy.com](http://njcleanenergy.com)).

and the highest penetration of feeders restricted to new DER interconnection.<sup>5</sup> ACE recognizes the impact of current processes and the urgent need for near-term action. In parallel, the impending implementation of FERC Order 2222 in less than five years will have fundamental impacts to utility and DER operations.<sup>6</sup> This implementation will require utility and Board actions to enable wholesale access to DERs, while maintaining safe, reliable, and affordable service. Without the significant analysis, planning, and implementation of new tools, processes, and system investments, DER in New Jersey will not be able to efficiently access new revenue streams through the PJM wholesale markets.

Recognizing this urgency and the variation in DER penetrations across utilities, the Draft Report recommendations should more strongly support the ability to pilot novel approaches to address impacts on current systems. Although the Draft Report recognizes the need for a “regulatory sandbox,” it does not provide a path to enable a regulatory sandbox or pilots.<sup>7</sup> The Final Report should recommend a process and timeline to enable utilities to pursue pilots to address challenges. For example, the Final Report could include a recommendation for the Board to open a docket where utilities may apply for size and time-limited pilot programs.<sup>8</sup> Enabling utilities to pilot new approaches will be important to allow utilities to “fast fail,” identifying approaches that do not work, and then “fast scale,” the approaches that do work, especially as the industry overall sees the need for significant change in interconnection and cost allocation practices. Given that ACE has the highest percentage of closed feeders of any utility in New Jersey, the Company has a strong interest in working with the Board and stakeholders to pilot approaches to quickly open

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<sup>5</sup> ACE had the highest percentage of closed feeders according to the summary by Guidehouse: ACE 15% (49/327), PSE&G 8% (150/1,936), JCP&L 0% (0/1,153), and RECO 0% (0/79). Draft Report at 30.

<sup>6</sup> PJM has proposed that DER participation begin in wholesale markets beginning in 2026. *See* Compliance Filing of PJM Interconnection, L.L.C., FERC Docket No. ER22-962, *available at* [20220201-er22-962-000.pdf \(pjm.com\)](https://www.ferc.gov/20220201-er22-962-000.pdf)

<sup>7</sup> *See, e.g.*, Draft Report at 81-82.

<sup>8</sup> One example of a state pursuing a regulatory sandbox approach Connecticut’s Innovative Energy Solutions program. *See* [Connecticut regulators want grid pilots to 'fail fast' in new approach to energy innovation | Utility Dive](#)

closed feeders and enable investments that mitigate the closing of feeders to new DER. Through new innovative pilot processes and projects, ACE can advance State goals nearer-term and avoid relying on potentially long and complex processes to identify uniform approaches for all utilities across the State.

ACE supports the rapid development of shared cost models across the full spectrum of DER integration, from interconnection study to implementation, which reflect both shared and customer-specific benefits. For example, although interconnecting DER may be the immediate reason for investment in portions of the distribution system, these investments can provide broader benefits. Those grid benefits may include increased reliability, resilience, and capacity for future load growth that supports complementary Energy Master Plan (“EMP”) goals, such as transportation electrification.<sup>9</sup> The level of sharing between DER and non-DER customers may vary based on the customer type and level of benefits provided to the system, from full socialization to full allocation to the DER customer.

ACE recommends that the Final Report reflect the potential for multiple cost-allocation approaches that reflect the diversity of DER, customer, and investment characteristics; and provide recommendations that support near-term development and piloting or wide-scale implementation of such programs. For example, a utility DER make-ready approach, analogous to the transportation electrification programs established in BPU policy, may be applicable to smaller DER customers requiring “last mile” upgrades. In addition, approaches based on forecasted DER and more sophisticated cost-allocation approaches may be more appropriate to larger DER or more significant system upgrades. For other grid upgrades, the development of a process focused on forecasting DER penetrations and proactively readying the system may be more effective. These

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<sup>9</sup> “2019 New Jersey Energy Master Plan: Pathway to 2050” at 176.

examples could effectively address the diverse market for DER, create more certainty and scale for developers, and recognize benefits to customers throughout the system. For this reason, ACE believes this area of policy should be directly addressed in the Final Report and advanced near-term for pilot or implementation.

## **II. ADDITIONAL RECOMMENDATIONS AND MODIFICATIONS FOR THE FINAL REPORT**

### **A. FERC 2222**

ACE recommends that the Final Report include a specific finding and recommendation highlighting the opportunities and challenges posed to retail programs and policies from the implementation of FERC Order 2222. Although the implementation of FERC Order 2222 will have broad impacts on utility operations, from interconnection to billing to legal disputes, the Draft Report does not contain a recommendation to further Board action to prepare for these industry-changing impacts. While PJM has a subcommittee that meets monthly, and sometimes more frequently, to discuss and problem-solve impacts related to the implementation of FERC 2222 from a PJM perspective, there is not a similar venue or process consider impacts and challenges to state regulation and retail implementation. However, the impact of FERC 2222 is more significant to retail programs, where issues such as standards for metering, monitoring, dispute resolution, double counting, and communication will need to be decided. ACE believes that the Final Report should consider establishment of a dedicated venue to prepare for FERC 2222 implementation.

### **B. Interconnection Agreements**

Several DERs connecting to ACE have sought to participate in the PJM Interconnection L.L.C. wholesale electric market. DERs seeking to participate in the wholesale market follow an interconnection process that differs from other New Jersey DERs. To streamline the



interconnection process for DERs planning to participate in the wholesale electric market, the Company recommends that the Board establish interconnection requirements for these projects, modifying the existing standard interconnection agreement to enable its use for state jurisdictional wholesale market projects.

A wholesale market project is non-FERC (state) jurisdictional when that project is the first wholesale project connecting to an electric distribution circuit; where no wholesale transactions have been made before. To sell into the wholesale market, the project must enter into a Wholesale Market Participant Agreement (“WMPA”) and the project must proceed through the PJM Queue to be evaluated for transmission system impacts, even when the interconnection takes place on the distribution system. The WMPA requires that the project proceeding through the PJM Queue, but connecting at the distribution level, have a valid two-party interconnection agreement between the EDC and the interconnection customer. Unlike Delaware, the District of Columbia, and Maryland, New Jersey precludes the EDCs from using the standard State interconnection agreement for these non-FERC jurisdictional applications.<sup>10</sup> As a result, the non-FERC jurisdictional Level 2/3 project in New Jersey is processed separately, which can result in a longer review/approval timeline.

In New Jersey, these projects are handled outside of the current processes for State jurisdictional interconnections; they do not follow the same interconnection process flow. Accordingly, these projects may experience delays in obtaining a two-party interconnection agreement, because they are subject to significantly different application and study processes. For all other state jurisdictional interconnections, communications to the customer regularly occur

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<sup>10</sup> In fact, the New Jersey standard form Level 2/3 Agreement specifically states that:

[t]his Agreement is not applicable to purchases of power under any EDC Qualifying Facility power purchase tariff, or for wholesale transactions as defined by the Federal Energy Regulatory Commission (“FERC”), and which are included as part of a PJM Wholesale Market Participation Agreement (“WMPA”). *A WMPA uses a separate form of Interconnection Agreement with the EDC.* (emphasis added)

within a Company developed application process, which is managed by the Green Power Connect team. By requiring a separate interconnection agreement, the efficiencies developed for processing the standardized State agreements are lost in New Jersey. Use of the state agreement results in project approvals for these types of applications moving significantly faster in Maryland. To achieve results like Maryland, the Board could consider modifying the existing standardized interconnection agreement to include non-FERC jurisdictional wholesale transactions.

Finally, on-going changes to the existing PJM process may require the Board to address this issue. While the PJM Queue process currently provides limited support for distribution interconnection studies, PJM's queue reform initiative may require an interconnection agreement prior to entering the PJM Queue. Without a revision to the process in New Jersey, PJM Queue Projects may experience even more significant delays in interconnection compared with those submitted in other jurisdictions. Thus, State requirements, including use of the standard interconnection agreement, in New Jersey should also apply to non-FERC jurisdictional interconnection applications that participate in the wholesale market.

### **C. Power Flow Studies**

ACE also recommends that the Board consider an additional amendment of the current New Jersey regulations, which require certain screens for Levels 1 and 2. Rather than the specific screens currently stated in N.J.A.C 14:8-5.4 and 14:8-5.5, ACE urges the Board to expressly authorize the use of power flow-based studies to determine any adverse impacts to the electric distribution system. The power flow screens take into consideration the location-specific impacts of generator interconnections to preserve the safe and reliable operations of the grid for all customers. The high-level, aggregate screens currently stated in the above-cited regulations do not address the granularity of studies needed at higher saturations of DER, as they do not specifically

focus on the potential system design constraints at the end-users. Observed conditions, such as high voltages due to voltage rise on secondary conductors during light load and heavy solar production, or distribution service transformer capacity limits are not specifically addressed with the screens currently stated in the regulations. Power flow analyses are essential for EDCs to determine the effectiveness of advanced technologies' capability to mitigate adverse system impacts caused by DER and performing advanced hosting capacity studies, as mentioned further in response to Recommendations 3 and 5, respectively.

Moreover, it should be acknowledged that, at the current saturations of DER, one or more of the screens currently stated in N.J.A.C. 14:8-5.4 and 14:8-5.5 would not pass; at which point most projects would be elevated to an interconnection Level 3, which allows for a power flow study per N.J.A.C. 14:8-5.6(c). In other words, the current levels of DER saturation may render the use of those screens for Levels 1 and 2 moot. Thus, to maintain the integrity of the different interconnection levels, manage costs, ensure efficiency, and best support customers, ACE recommends amendments to authorize power flow analyses for Levels 1 or 2.

**D. Fee Correction**

Finally, ACE notes an unfortunate typographical error concerning Interconnection Fees for Level 2 in the Draft Report that should be corrected in the Final Report. Consistent with the Board's regulations, the ACE application process flow should note that the fee for Level 2 applications is \$50 + \$1/kW. Notwithstanding the typographical error, these fees are accurately stated in ACE's online content and in the logic of the Connect The Grid ("CTG") tool used for processing interconnection applications. As Guidehouse acknowledged that it had reviewed the customer-facing applications and other information, all of which state the correct fee, it can attest

to the accuracy of notice to customers. Thus, ACE respectfully requests that Guidehouse correct this typographical error in the Final Report.

### **III. RESPONSE TO DRAFT REPORT RECOMMENDATIONS**

ACE provides the following comments related to the nine targeted Findings and Recommendations stated in the Draft Report.

**Finding #1: N.J.A.C.14:8-5 IEEE 1547 reference is out of date. N.J.A.C.14:8-5 currently references IEEE 1547 2003 however IEEE has released a 2018 version IEEE 1547 2018 and an amendment IEEE 1547a 2020.**

#### **Recommendation #1:**

- a) Adopt the latest version of IEEE 1547 in NJ (IEEE 1547-2018 / IEEE 1547a-2020).
- b) Update N.J.A.C.14:8-5 to indicate the latest version adopted in NJ is IEEE 1547-2018 / IEEE1547a-2020.

#### **ACE Comments:**

ACE agrees that the primary reference to IEEE 1547, at N.J.A.C. 14:8-5.1 in the current regulations, is out of date. However, ACE notes that the regulations also include some references to the standard “as amended and supplemented.”<sup>11</sup> ACE agrees with the recommendation to adopt the latest version of the standard, so long as the regulations consistently include the necessary clarifying language, “as amended and supplemented,” whenever the standard is noted. Consistent application of the clarifying language is important, as future amendments may become effective prior to readoption of the regulations.

Additionally, ACE seeks clarification in the Final Report as to whether the recommendation is for the Board to adopt everything in IEEE 1547, or to merely update citations within the regulations. IEEE 1547 defines a myriad of technical requirements. Thus, ACE recommends that the Board provide further opportunities for the EDCs to offer comments on

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<sup>11</sup> See, e.g., N.J.A.C. 14:8-5.1 (defining “area network,” “spot network,” and “point of common coupling” with reference to IEEE 1547 “as amended and supplemented”).

which technical requirements from IEEE 1547 are best aligned with the State goals and objectives, as well as system design.

**Finding #2: There are opportunities to streamline the interconnection process.**

**There are opportunities to streamline and automate the interconnection process. Applications are sent back to customers by EDCs based on missing or incorrect information, which is inefficient. Interconnection application status and key information is tracked using a different process and different software for each EDC, particularly for Level 2 and Level 3 interconnection requests, including key milestones such as timelines, schedule and budget for upgrade commitments, and construction timelines. This makes it difficult for the NJ BPU to conduct audits of interconnection process key performance indicators across EDCs.**

**The EDCs do not collect fees for Level 1, yet a large percentage of applications are presently Level 1, with a projected increase of Level 1 applications in the future. For example, an increase in smaller (Level 1 <= 10 kW) interconnection applications is expected due to a projected increase in DER aggregation projects enabled by the adoption of FERC Order 2222.**

**Recommendation #2:**

- a) EDCs without an auditable electronic application tracking process shall set in place interconnection application software that will provide a structured approach for data intake and notifications for all interconnection Levels.
- b) EDCs shall install or upgrade to a software-based application platform capable of tracking key information throughout the interconnection application process. Such a platform would, at a minimum, be capable of tracking and automating the permitting process, documenting generation type and capacity, timelines, schedule and budget for upgrade commitments, and construction timelines, as well as reporting out this information in an easily auditable format. The software shall be capable of generating automatic email and online notifications to the customer with the goal of enforcing clearly defined tariff timelines, reducing the turnaround time for missing data. Ideally the software would be easily customizable by each EDC.
- c) BPU to require EDCs to collect and store electronically a uniform set of inputs and key performance indicators (KPIs) such as timelines for all interconnection applications at all interconnection Levels.
- d) BPU to compare KPIs relative to N.J.A.C. 14:8-5 timelines and require underperforming EDCs to implement software based improvements within a set timeframe.
- e) Make an FAQ webpage to provide guidance useful to interconnection customers engaging in the interconnection process.
- f) NJ EDCs should charge Level 1 Application fees, with the amount of the fees to be determined by each EDC.

**ACE Comments:**

- a) ACE currently has the CTG tool, an electronic online portal that is used for all DER application submissions, processing and tracking. The tool is used to track key information throughout the

interconnection process that includes project timelines and statuses. The tool also has built-in email capabilities, which allow in-portal communication across all collaborators and notifications on key application status changes.

- b) *See* comments to (a) above. The CTG tool that ACE uses to process interconnection applications has capabilities and features that allow for the addition of future enhancements. ACE would need to further investigate the integration of externally tracked activities, such as permitting into its existing tool.
- c) ACE currently tracks and stores electronically: (1) the average number of days it takes to process applications for Acknowledgement, Approval to install, and Approval to Operate; and (2) the percentage of time to process applications for Acknowledgements, Approval to Install, and Approval to Operate.
- d) The CTG tool used to process interconnection applications has built in logic to incorporate regulatory required timelines to process applications. This allows specialists working on applications to be alerted each time an application is approaching a required deadline.
- e) ACE has an existing “My Green Power Connect” website that has information on the interconnection process and provides general guidance to developers/contractors and customers. The site also has an FAQ section that ACE can update to provide content that’s more tailored to interconnections.
- f) ACE supports the sharing of costs between DER and non-DER customers from interconnection studies to grid upgrades. The processing of Level 1 applications, including the creation and maintenance of systems, requires ongoing utility investment and maintenance. Thus, the Company supports including this recommendation in the Final Report and setting Level 1

Application fees to fairly balance sharing of costs without creating a significant hurdle for customer participation.

**Finding #3: Existing online EDC hosting capacity maps are inconsistent across EDCs. Existing online EDC hosting capacity maps, including data update frequency and underlying approach to calculating interconnection capacity headroom, appears inconsistent across EDCs. Hosting capacity information is inconsistently labeled across EDCs resulting in the quantity of closed circuits potentially being overestimated by stakeholders.**

**Recommendation #3:**

Update N.J.A.C.14:8-5 to require uniform data granularity and update frequency for capacity map tools using industry standard methods:

- a) Update capacity maps at least yearly, or when change in generation on a feeder exceeds an EDC specified amount, or when the aggregate change in load exceeds an EDC specified amount.
- b) EDCs to develop a shared lexicon to label their maps.
- c) Require identification of equipment potentially requiring a system upgrade on the hosting capacity maps (e.g., voltage controllers, protective relays, communication systems, etc.).
- d) Display a uniform unit cost guide for system upgrades on hosting capacity maps.

**ACE Comments:**

ACE supports the recommendation to establish requirements on hosting capacity maps, updating the frequency and the level of data granularity provided by the maps, to enhance the customer interconnection experience. As suggested in this recommendation, ACE currently updates hosting capacity and restriction maps on a quarterly basis or when a significant change to generation on a feeder occurs. It should be recognized that EDC-specific technical criteria and capabilities may influence the methodologies selected for hosting capacity calculations, and how results can be used and displayed. Thus, ACE recommends flexibility in how shared lexicons are developed by EDCs such that they are widely adaptable based on methods and capabilities.

On the other hand, ACE recommends removing the recommendation to display uniform cost guides on hosting capacity maps in the Final Report. Although feeder hosting capacity constraints are often uniform, the scope and cost to implement those system upgrades vary based on application and a feeder's specific circumstances, including location, system size, existing

infrastructure available, and other circumstances. Displaying pricing may prove complex to manage given the dynamic nature of hosting capacity studies. ACE is also concerned that displaying a uniform unit cost guide may prove to be misleading to customers. Thus, ACE urges the removal of this recommendation from the Final Report.

**Finding #4: There is no way to accelerate interconnection projects within the NJ interconnection rules. There is currently no pre application process in NJ. Industry advocates in NJ suggested that a preapplication process will provide valuable information about available grid capacity and likely upgrade costs without waiting for a full interconnection study or application process. Additionally, there is no fast track process in NJ by which projects with no electrical or cost allocation impacts on other projects are eligible to apply for a feasibility study to be completed on a faster timeline than the normal study process.**

**Recommendation #4:**

- a) Implement a pre-application process required for projects 500 kW and above,<sup>77</sup> and optional for other projects.
- b) Implement a uniform fee structure for pre-applications process with the amount determined by the EDCs for each respective interconnection Level.
- c) Make an FAQ webpage to provide guidance useful to the pre-application process.
- d) For projects less than 500 kW, EDCs should develop detailed example applications and provide to interconnection applicants via their interconnection FAQ webpages.
- e) The Rule 21 outline calls for a fast-track project implementation process. A technical working group made up of the EDCs shall within six months develop a fast-track process appropriate to NJ for small inverter-based generators.

**ACE Comments:**

- a) ACE supports implementation of a pre-application process on a case-by-case basis. A pre-application template currently exists and is available on the ACE “My Green Power Connect” website. In previous instances, upon request from developers, it has been used to provide information to developers on location specific constraints and observations that are otherwise not obtainable from the interactive hosting capacity/restriction maps; these are based on the customer’s proposed interconnection request. It has been used as a non-binding review to provide developers with insights to aid in their pre-application decision-making and does not provide detailed scope or cost for any system upgrades. ACE would also evaluate incorporating



the pre-application process into the online CTG portal for processing applications, for better streamlining. ACE notes that the impact on Company resources required to process interconnection applications would need to be evaluated with broad implementation of a pre-application process.

- b) ACE does not currently have an established fee structure for processing pre-applications and would need to evaluate further a fee that would be most effective.
- c) ACE can incorporate FAQs for pre-application process onto our existing website once the process is established.
- d) ACE does not have a response for this recommendation and seeks clarity in the Final Report.
- e) As discussed above, in the Additional Recommendations and Modifications section, ACE recommends that any amended process focus on and be supportive of the technical studies (such as power flow studies) needed to identify grid impacts, while preserving the EDCs ability to streamline the necessary reviews to address those technical constraints.

**Finding #5: New Jersey EDCs do not have EDC-specific interconnection rules or tariffs.**

- a) **New Jersey EDCs have adopted N.J.A.C.14:8-5. However, N.J.A.C.14:8-5 does not address EDC-specific interconnection issues in detail.**
- b) **Communication, telemetry, and backflow protection criteria in N.J.A.C.14:8-5 do not conform to modern interconnection technology. Common non-controversial new equipment capabilities, such as DERMS monitoring and control and IEEE 1547 smart inverter functionality, have barriers to implementation. Volt/VAR capability is not acknowledged in the generation application process or compensated in grid operation, and barriers to installation of storage products and meter collars that are approved in other states remain to be overcome in NJ.**

**Recommendation #5**

- a) To address the issues such as non-controversial new equipment capabilities that are not straightforward for EDCs to implement, NJ BPU should convene a technical working group to develop adopt and develop into N.J.A.C.14:8-5, as appropriate for NJ, the most current specific guidance that incorporates practices, guidelines, and requirements such as those now included in IREC, California Rule 21, IEEE 1547, and similar sources.

- b) Create a tiered structure for documentation comprising the interconnection rules in NJ: (1) tariff, (2) business practice manual, and (3) handbook, where the handbook and business practice manual are updated annually, and the tariff is updated less frequently (e.g., on a three-year cycle).
- c) Each EDC should have one representative attend the IEEE 1547 working group annually to assure they align with the latest recommendations of industry experts.
- d) The EDCs shall clarify technical criteria in N.J.A.C.14:8-5 to avoid overly conservative interpretations and re-evaluate on a regular basis.
- e) A consultant should be assigned to work with EDCs to research, pursue, and enable on a continuous basis, the implementation of new equipment and technology capabilities in a manner which will support and improve safety and reliability. These new capabilities would include (but not be limited to) DERMS monitoring and control, which will be necessary to track FERC Order 2222 wholesale participation and aggregation, adoption of existing IEEE 1547 smart inverter functionality such as Volt/VAR and Volt/Watt.
- f) The NJ BPU should provide a “regulatory sandbox” for stakeholders, including equipment vendors and the EDCs, to pilot new equipment capabilities, procedures, thresholds for technical studies (e.g., increasing Level 1 from 10 kW) and cost recovery pilots. The regulatory sandbox will allow stakeholders to align operational practices within the diverse sectors in each EDC service area while maintaining grid safety and reliability.

**ACE Comments:**

As outlined in this Recommendation, the Company supports continuing to adapt and modernize its technical interconnection requirements as well as enabling DERMS and Smart Inverter technologies. However, the recommendation should remove ambiguous language, such as “non-controversial,” as technical solutions or concepts that are viewed by some stakeholders as “non-controversial” may be technically infeasible, costly, or present cybersecurity or other risks to the system. Due to these and other constraints, the recommendation should reflect that the EDCs should ultimately retain governance over their interconnection requirements while receiving input from stakeholders that may advance the interconnection process. ACE will plan to participate in the working group and steering committee as detailed in this Recommendation.

**Finding #6: The generator interconnection application queuing and cost allocation process in New Jersey is serial. The generator interconnection application queuing and cost allocation process in New Jersey is overwhelmingly a serial process for Level 1, Level 2, and Level 3 generator interconnection applications. The current process also follows the FERC (transmission) small generator pro forma document.**

**Recommendation #6:**

- a) NJ EDCs should implement a uniform streamlined flexible queue process across EDCs that would prioritize a “first ready, first through” approach to support viable projects and avoid clogging the queue for Level 1, Level 2, and Level 3 projects, while ensuring equity and fairness in the queue.
- b) NJ BPU to direct the EDCs to form a stakeholder process to address a required list of queue improvements from the NJ BPU. Examples of required items are a cluster process, a fast-track process, milestone processes, penalties for withdrawing or maximum queue ‘parking time,’ identifying new thresholds for existing N.J.A.C.14:8-5 Level definitions, and planning a finite transition timeline to new interconnection processes.

**ACE Comments:**

- a) The CTG tool has built in logic (sunsetting) to avoid “parked” applications that have remained dormant for two (2) years. If this recommendation becomes a BPU requirement, ACE recommends evaluation of the “sunsetting” timeline; possibly making it shorter.
- b) The draft Recommendation should be modified to enable utilities to develop and tailor study approaches based on system needs and customer characteristics rather than focus on a prescriptive set of interconnection queue design elements. While ACE supports improving the interconnection queue process and consideration of several of the “examples of required items” proposed by Guidehouse,<sup>12</sup> this draft Recommendation is overly prescriptive. There is limited research supporting the Recommendation and insufficient discussion of impacts across the varied types of interconnection applications that utilities receive. For example, the summary table within the Draft Report itself appears to show only one of the five jurisdictions considered to have a requirement that utilities use clustering processes as included in the Draft

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<sup>12</sup> These items include: “cluster process, a fast-track process, milestone processes, penalties for withdrawing or maximum queue ‘parking time,’ identifying new thresholds for existing N.J.A.C.14:8-5 Level definitions, and planning a finite transition timeline to new interconnection processes.” See Draft report at 82.

Recommendation's "required items."<sup>13</sup> Thus, ACE recommends modifications to this recommendation in the Final Report.

**Finding #7: Cost allocation and cost recovery options for accelerated interconnection of renewables have not been defined in NJ.**

**The BPU has not set a policy for demonstrating the criteria by which the need for grid modernization would be assessed to justify a grid-forward grid modernization upgrade approach, nor a policy for establishing thresholds for pro-rata cost allocation.**

**Recommendation #7:**

- a) NJ BPU should define a mechanism to be put in place to establish numerical cost and capacity thresholds above which grid modernization costs could be spread over a broader set of beneficiaries.

**ACE Comments:**

As discussed above, ACE strongly supports inclusion of a recommendation furthering cost allocation policies, and the Final Report should create opportunities and venues for utilities to propose, pilot, and then fully implement cost-allocation approaches rather than working through a likely protracted state-wide proceeding or working group. Although the Draft Report recognizes the need for a "regulatory sandbox" and cites cost recovery as a potential area, this draft recommendation does not currently reflect that approach.<sup>14</sup> The Final Report should recommend a process and timeline to enable utilities to pursue pilots to proactively address challenges for cost allocation to accelerate the grid's ability to enable state policy goals rather than rely on reactive mechanisms, which will likely contribute to the continuation of lengthy interconnection processes.

The recommendation should also be modified to recognize that multiple cost-allocation mechanisms or programs may be needed to effectively prepare the grid to integrate DER and respond to interconnection applications. As ACE outlined in its earlier comments, the Company

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<sup>13</sup> Two jurisdictions, Maryland and the District of Columbia, show no option for clustering, while Virginia allows, but does not require utilities to adopt clustering approaches for Level 2 and Level 3. The New York entry states that the applications are managed "in the order in which they are received." See Draft Report at 64.

<sup>14</sup> Recommendation 5 advances a "regulatory sandbox" for "cost recovery pilots," amongst other areas. See Draft Report at 81.

recommends exploring proactive models where the EDC (1) forecasts DER penetration on the system, (2) uses that forecast to preemptively upgrade the system in key locations and strategically, (3) assesses a transparent interconnection fee on interconnecting DERs to offset the costs of those preemptive upgrades, and (4) recovers a portion of those costs from the broader distribution customer base in order to recognize benefits of accelerated DERs.<sup>15</sup> Rather than focusing on reactive study and cost allocation processes, which are triggered by interconnection requests, proactive models of preparing the grid to accommodate DER are becoming increasingly important to minimize interconnection delays and allow New Jersey to meet its clean energy goals. For smaller interconnection requests and investments that may be more difficult to forecast, the Company also recommends that ‘make-ready’ models be considered. For these, and other models that may be explored, the Company supports the continued inclusion of fairness as outlined by Guidehouse in the Draft Report.<sup>16</sup>

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<sup>15</sup> See ACE Comments, filed May 17, 2022, “In the Matter of Modernizing New Jersey’s Interconnection Rules, Processes and Metrics (“Grid Modernization”), Docket No. QO21010085.

<sup>16</sup> The fairness principle as articulated in the Draft Report reads,

NJ BPU should consider fairness in establishing cost recovery policies. For instance, if grid modernization investment provides a benefit to all customers, not just DER beneficiaries, then the investment should be covered by all rate payers (e.g., replacement or upgrade of obsolete equipment, substation relays, installation of voltage control/monitoring, removal of thin primary wire, installation of communications would benefit all customers).

See Draft Report at 84.

**Finding #8: EDCs do not currently submit integrated DER plans as recommended in the EMP. Integrated DER plans are an effective basis for planning distribution grid expansion and identifying cost recovery for grid modernization, and are recommended in the EMP. EDCs do not currently submit integrated DER plans.**

**Recommendation #8:**

EDCs should submit integrated DER and integrated distribution plans that will allow NJ to meet the EMP goals, and that outline the investments the EDCs will need to make, including cost benefit analysis for each grid component upgrade they say will be needed to meet the goals.

**ACE Comments:**

ACE understands this recommendation in the broader context of the EMP, which identified a process by which the EDCs were to submit integrated distribution plans (“IDPs”). The Final Report should align with the EMP, which gives the electric public utilities one year to submit IDPs following regulatory action by the Board. Specifically, the EMP states, “the Board will adopt appropriate guidelines for the development of the IDPs, the electric public utilities should develop their respective plans for submittal to NJBPU within one year of the Board Order.”<sup>17</sup> At this time, the Board has not initiated proceedings or adopted guidelines for the development of IDPs.

The Recommendation should also remove reference to “cost benefit analysis for each grid component” as that is not a required component of the EMP recommendation 5.1.1 on Integrated Distribution Plans and was not arrived at through the process prescribed in the EMP. ACE asks that the Final Report reflect the process established in the EMP. As identified in the Presentation, the implementation readiness for this recommendation is low, which should also be directly reflected in the findings, recommended actions, and implementation plans.<sup>18</sup>

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<sup>17</sup> “2019 New Jersey Energy Master Plan: Pathway to 2050” at 176.

<sup>18</sup> “Grid Modernization Study Draft Findings and Recommendations,” at 6, presented June 27, 2022. Available at Grid Modernization | NJ OCE Web Site (njcleanenergy.com).

**Finding #9: Non-renewable fuel sources are not able to aggregate their generation with that of renewable generators and count the generation toward the NEM program.**

**N.J.A.C.14:8-5 only allows Class I renewable resources (e.g., solar technologies, photovoltaic technologies, wind energy, fuel cells powered by renewable fuels, geothermal technologies, wave, or tidal action, and/or methane gas from landfills or a biomass facility, provided that the biomass is cultivated and harvested in a sustainable manner) to participate in the NEM program. Non-renewable fuel sources are not able to aggregate their generation with that of renewable generators and count the generation toward the NEM program.**

**Recommendation #9:**

- a) NJ BPU should provide a rulemaking that in light of EMP goals, non-renewable fuel sources should be separate from renewable sources (separately metered) and cannot be combined for net metering purposes, allowing full credit for renewable generation sources such as solar without penalty for co-located non-renewable source.
- b) NJ BPU should consider allowing non-renewable fuel sources play in the net metering market, however at a reduced rate, or based on Avoided Energy Cost e.g., per Georgia Power.

**ACE Comments:**

ACE recommends removing Recommendation 9 as the draft Recommendation has, as identified by Guidehouse in the Presentation, low levels of supporting evidence. The Recommendation reflects fundamental policy modifications that are inappropriate for a report focused on interconnection. Instead, this recommendation, and its subparts, should be moved to the area of the report that includes out-of-scope stakeholder topics.<sup>19</sup> Neither the Draft Report nor the Presentation contain consideration of the likely impact on the NEM cap or implications on resources that directly advance EMP goals. The “avoided” cost recommendation inappropriately proposes an approach, similar to compensating “Qualifying Facilities” at avoided cost under the Public Utility Regulatory Policies Act, without any discussion of interactions with existing tariffs for Qualifying Facilities<sup>20</sup> and without discussion or consideration of future enablement of participation in PJM markets through the implementation of FERC 2222. These are significant

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<sup>19</sup> The stakeholder supportive comments included in the Presentation to support this recommendation are from a single stakeholder advocate.

<sup>20</sup> For example, Qualifying Facilities 1,000 kW or less are already eligible for energy to be purchased at full avoided energy costs under ACE’s SPP rate, as stated in ACE’s BPU-approved Tariff.

policy and tariff ramifications that have not been fully vetted, and cannot be fully vetted, prior to the release of the Final Report.

In addition to the policy and tariff ramifications, Recommendation 9 is premature as it does not consider the financial investment implications and complications that would be required to separate different behind-the-meter resources compensated, potentially, via different tariffs. NEM is accounted for at the Point of Interconnection which is the change in ownership between the Customer and the Utility. Metering a renewable facility separately from a non-renewable does not necessarily differentiate which source of energy was injected on the grid, and unless all load is placed behind the generation meters, there would be no way to ensure which electrons are from which source creating the potential for NEM Renewable credit to be artificially increased by non-renewable sources. Furthermore, even with all proper metering in place, the billing system and settlement system may need to be upgraded to support automatic billing calculations to ensure the customer is getting the proper credit. Unless all metering is required to be at the same location (at or near POI), additional meters located through a customer facility to capture generation and load introduces additional burden (billing and field resources) and employee safety risk. Retail Supplier relationships may become more complicated due to the additional meters and rules required to support such activities.