UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Innovations and Efficiencies in Generator Interconnection

Docket No. AD24-9-000
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For Public Use

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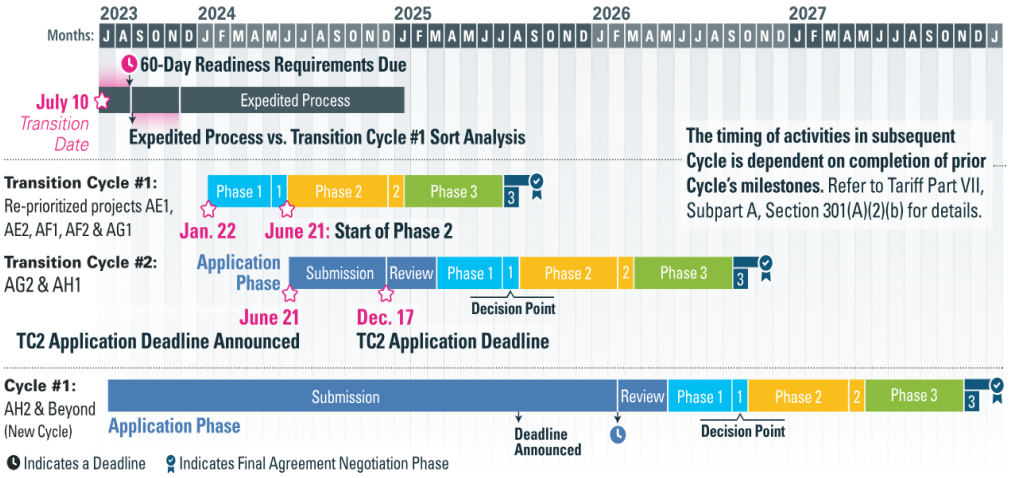
Statement of Donald Bielak, P.E. on Behalf of PJM Interconnection, L.L.C.

I am pleased to present this statement on behalf of PJM Interconnection, L.L.C. ("PJM"). I serve as the Director of Interconnection Planning for PJM. In this role, I am responsible for the PJM Generator Interconnection Process, including project management, engineering and analytical studies, and construction implementation. Prior to holding this position, I served in several on-shift and engineering support positions in the Operations division since originally joining PJM in 2004. I also served as Manager, Reliability Engineering and as Sr. Manager/Director, Dispatch where I was responsible for the oversight and operation of PJM's Valley Forge and Milford Control Centers. I am a licensed Professional Engineer and hold a Bachelor of Science degree in electrical engineering and a Master of Science degree in both electrical engineering and engineering management, all from Drexel University.

Before responding to the individual questions for Panel 1, I wanted to put into context the status of PJM's transition to its new generator interconnection process. As the Federal Energy Regulatory Commission ("Commission") is aware, between April 2021 and May 2022, PJM worked with our stakeholders to develop a detailed transition plan to work through the interconnection backlog that resulted from the flood of interconnection requests that we had received as a result of state Renewable Portfolio Standard ("RPS") mandates, Congressional extensions of the production and investment tax credits for renewables, and other factors. We are grateful for the Commission's prior approval of those reforms.

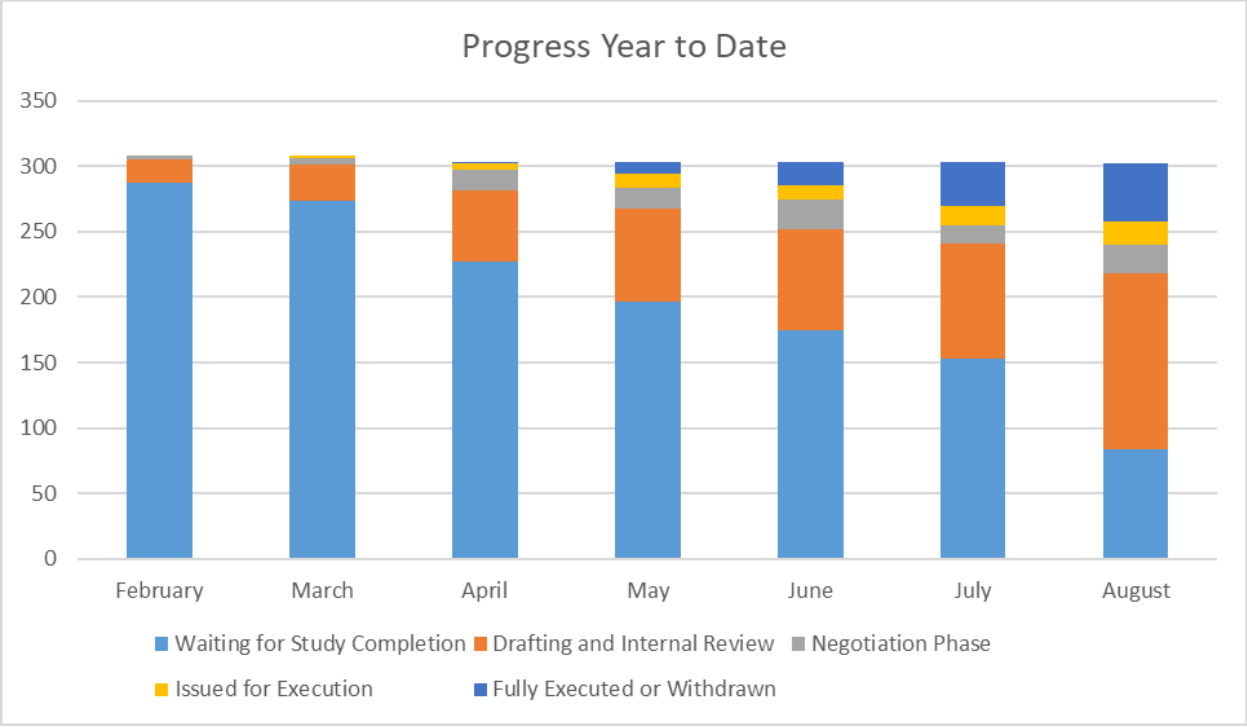
By way of reminder, that transition process involved the establishment of a "Fast Lane" (or, an "Expedited Process," as it is formally referenced in the PJM Tariff) for projects with minimal upgrades required as well as two transition cycles for projects which already had queue positions. The timeline for that process is illustrated below:

Figure 1: PJM Interconnection Planning Transition Timeline



As seen in the chart below, PJM and the PJM Transmission Owners have made substantial progress. We are on track to tender the Facilities Studies and relevant service agreements for the Fast Lane projects by the end of the year. The overall transition process includes "gating" in which certain milestones in the current cycle must be completed before proceeding with steps in subsequent cycles. Specific to the Fast Lane is a requirement to tender the agreements for projects within that cycle before proceeding with certain phases of Transition Cycles Nos. 1 and 2. Meeting this milestone allows PJM to build the models for subsequent cycles and ultimately prevent cascading delays to the entire transition. I would be remiss if I did not note that this effort is a joint one with the PJM Transmission Owners. We are grateful that they have committed resources that allow PJM to project completion of these key aspects of the Fast Lane process by year end.

Figure 2: PJM Interconnection Planning "Fast Lane" Progress by Month



I recognize that this workshop is focused on potential future reforms that are under consideration. As the demand for interconnection will continue and even grow, we agree that this forward look is appropriate. Nevertheless, I need to be frank that imposing some of the requirements of Order No. 2023 in the middle of this transition could further elongate this transition and create much in the way of "redo" work. PJM attempted to address this in our compliance filing by explaining those places where our Commission-approved process meets the intent and goals of Order No. 2023, even if the exact means of accomplishing those goals may differ from the specifics of the Commission Order. The Commission clearly left the door open for such requests, and we are grateful for that.

In this forum, I wanted to reiterate that adding new requirements into this negotiated and Commission-approved transition process mid-stream could very well prove counter-productive by actually slowing and complicating the process at the very time all of us are desiring it to move faster in order to process the existing backlog of interconnection requests. We ask that the Commission and its Staff keep this in mind as the Commission contemplates next steps coming out of this workshop.

With these thoughts in mind, I provide below my responses to a number of the Commission Staff's questions directed to Panel 1.

Efficiencies Panel 1: Further Efficiencies in the Generator Interconnection Process

1. What specific types of additional pre-application data provided to interconnection customers would facilitate greater efficiencies in the application phase and the rest of the generator interconnection process?

a. How would these types of data be helpful to interconnection customers?

PJM publically posts or makes available several forms of data to allow prospective developers to make informed decisions about their projects. For instance, PJM posts interconnection requests on its website. This type of information includes, but is not limited to, megawatt ("MW") injection, location, fuel type, and project status. PJM also publically posts interconnection studies and agreements. Finally, PJM makes available power-flow study cases such that each developer, once completing a CEII request, can conduct its own analysis.

In 2022, PJM launched the first version of the Queue Scope web-based tool which allows prospective generation developers or other users to assess the location of future generators before they formally enter PJM's interconnection queue. Using PJM's Regional Transmission Expansion Plan and interconnection queue studies, the tool analyzes the impacts on the PJM system based on the amount of megawatts that would be added to the system at a chosen point of interconnection. Queue Scope is designed to allow developers to make informed decisions by better assessing the viability of their potential projects before entering PJM's interconnection process. While the initial version was simply tabular, in 2023, PJM released a geospatial map-based version of Queue Scope to make it even easier to interpret the data. Since the beginning of 2024, PJM's Queue Scope tool has been accessed more approximately 32,500 times within the United States alone.

b. Are there inefficiencies or complications associated with providing these types of additional pre-application data?

PJM believes in providing transparent data and allowing project developers to tailor to their unique intended use case and interpret it in their own way. Using Queue Scope, as an example, the data delivery is technology-driven and self-service. While there was an initial up-front investment by PJM in developing the technology, providing data on a continuous basis thereafter is not particularly challenging. Based on the level of usage previously discussed, Queue Scope appears to be well received by the developer community.

2. Regarding potential fast-track processes:

a. Of the existing fast-track processes, such as California ISO's independent study process, which work well? What about them could be improved or emulated to achieve greater efficiencies?

In essence, the entire PJM queue transition which is currently underway is effectively a fast-track. The aforementioned Fast Lane and Transition Cycle No. 1 are currently underway, and Transition Cycle No. 2 is currently accepting submissions of eligible projects. While we are still early in the transition process, the results show that the process is working well. Within the Fast Lane process, PJM is on track to tender agreements for approximately 26,000 MW across approximately 300 separate projects. For Transition Cycle No. 1, PJM originally studied 308 projects, totaling approximately 46,000 MW. About a third of those projects voluntarily withdrew after receiving the System Impact Study reports which shows a great success in having only viable projects remain in the queue. Currently, within Transition Cycle No. 1, there are 204 projects moving forward, which total 30,513 MW. The Transition Cycle No. 1 projects are scheduled to have their agreements tendered by the latter portion of 2025. In addition, there are over 97,000 MW, representing more than 1,100 projects eligible for Transition Cycle No. 2. The submission window is still open, and PJM will not know the full extent of the submissions until mid-December.

b. For interconnection requests that have little or minimal impact on existing transmission capacity, should there be a fast-track process or other prioritization method?

In PJM's generator interconnection process, there are accelerated off-ramp criteria at Decision Points I and II. These criteria are designed to determine whether a project can proceed through an accelerated process, or if it should transition to a different study path.

- Decision Point I: At this stage, a project can proceed through an accelerated path if it meets the following criteria:

  1. No System Reinforcements Needed: The project does not require any significant network upgrades or only needs minimal system reinforcements that do not trigger further studies.

  2. No Adverse Impacts: The project should not cause adverse impacts on the reliability or operational performance of the system.

  3. Feasible Commercial Operation Date ("COD"): The project should have a feasible COD that aligns with the accelerated timeline.

- Decision Point II: This decision point involves a reassessment of the project's eligibility for the accelerated path. The criteria are:

  1. Verification of Initial Conditions: The conditions that allowed the project to proceed at Decision Point I should still hold true. There should be no new findings that require additional studies or system reinforcements.

  2. No Significant Changes: There should be no significant changes in project scope, location, or technology that could affect the system's reliability or require additional analysis.

3. Continued Alignment with COD: The project's COD should still align with the accelerated schedule, and the necessary agreements should be progressing on time.

As noted above, the Fast Lane process was developed by PJM and its stakeholders in the process leading up to our interconnection reform filing. We believe it has been very beneficial in "unclogging" smaller projects with minimal upgrade requirements that were stuck behind larger projects. Of course, the true test will be whether, once through the process, those projects actually proceed to build and achieve commercial operation.

3. What types of remedial or mitigation mechanisms could address instances where inadvertent oversights or technical difficulties result in milestone failures, and interconnection customers do not learn of these issues in time to file a waiver request? In such instances, where good faith and a significant consequence to not meeting the particular milestone are also present, how may transmission providers modify their tariffs to reach a balanced resolution that enhances the stability of the interconnection process while also ensuring that only viable generating facilities remain in the queue?

PJM recognizes that its interconnection process is unique as it was specifically designed by stakeholders to best meet the needs of the PJM system. In order to aid in the success of its developers submissions, PJM has produced a large cache of informational videos which are available to educate developers. In addition to this self-service material, PJM continually provides training to the developer community at our public monthly Interconnection Process Subcommittee ("IPS") meetings. Often times, material is presented across multiple IPS meetings, especially if the topics are of particular importance. As a result, PJM can look to the 95% success rate of projects that were able to satisfactorily supply their needed information to proceed from Phase I to Phase II of Transition Cycle No. 1 which just occurred. PJM also uses the IPS meetings as a forum to receive developer feedback and explore opportunities to minimize potential burdens and identify ways to streamline the interconnection process.

Often, the best remediation is for developers to be forthcoming and to proactively communicate openly and honestly with PJM to address a situation before it requires remediation. Generally, project developers who run into issues meeting the milestones that exist in their signed agreements are not proactively communicating. It is common for developers that do communicate and demonstrate issues outside of their control as well as satisfaction of the Tariff's criteria to be accommodated with extensions of their milestones.

While adherence to the milestones are ultimately the responsibility of the project developer, PJM believes it can assist in the form of new technology to help with status tracking. PJM is currently making improvements to its developer-facing software which should better allow for self-service tracking of milestones and upcoming due dates to assist in prevent oversights.

The question also asks about whether modifications to existing tariff provisions should be considered to help move toward balanced resolutions in cases where there are clerical or inadvertent oversights in the interconnection process. As to issues beyond a developer's control that arise in achieving milestones, PJM stands ready to work with developers that are proactive on these issues and has the discretion under the Tariff to modify those milestones for developers who meet the Tariff's standard.

As to potential tariff provisions addressing flexibility for projects within the queue, there is a balance between the need to require that deadlines be met so as to keep the interconnection process moving and avoid impacts to others with, on the other hand, recognizing the existence of inadvertent omissions. To address this issue, PJM developed a deficiency review process in its interconnection reforms. That process, in our view, should remain the primary vehicle for addressing deficiencies and providing a focused and time-limited opportunity for developers to cure deficiencies in their interconnection requests.

4. What other opportunities exist to increase the efficiency of the existing generator interconnection procedures and agreements?

- Enhancing project eligibility criteria. By having more robust requirements for projects to enter the interconnection process, as well as a clear understanding of a project's contemplated business structure, there will be less evaluation of projects which may not be viable. This would allow for a higher success rate of executing service agreements, higher success rate of construction, and ultimately less time to evaluate.

- Requiring development milestones during the study process. By requiring milestones, such as permitting and equipment memoranda of understanding ("MOUs"), to be set and agreed to earlier in the study process, it may determine project viability earlier and require less studies to be performed.

- Further simplification of the Generator Interconnection Agreement ("GIA") and other service agreements. After all of the study process is completed, there may still be a lengthy negotiation period leading up to the completion of the service agreement. If additional sections of the GIA can be simplified, and the overall drafting process can be simplified, then the drafting and executing phases for the GIA (and other applicable service agreements) will go much quicker and require fewer resources.

- Improved understanding of construction obstacles. By having tighter enforcement of construction obligations post-execution of a service agreement, there will be more of an emphasis on getting viable projects online and not investing resources in non-viable projects. PJM has approximately 38 GW of generation under contract, however, the contractual tools to incentivize construction are largely limited to breaching and termination of a project. The Commission should consider exploring obstacles to construction as well as opportunities that may exist to facilitate construction of projects consistent with the terms of their service agreements.