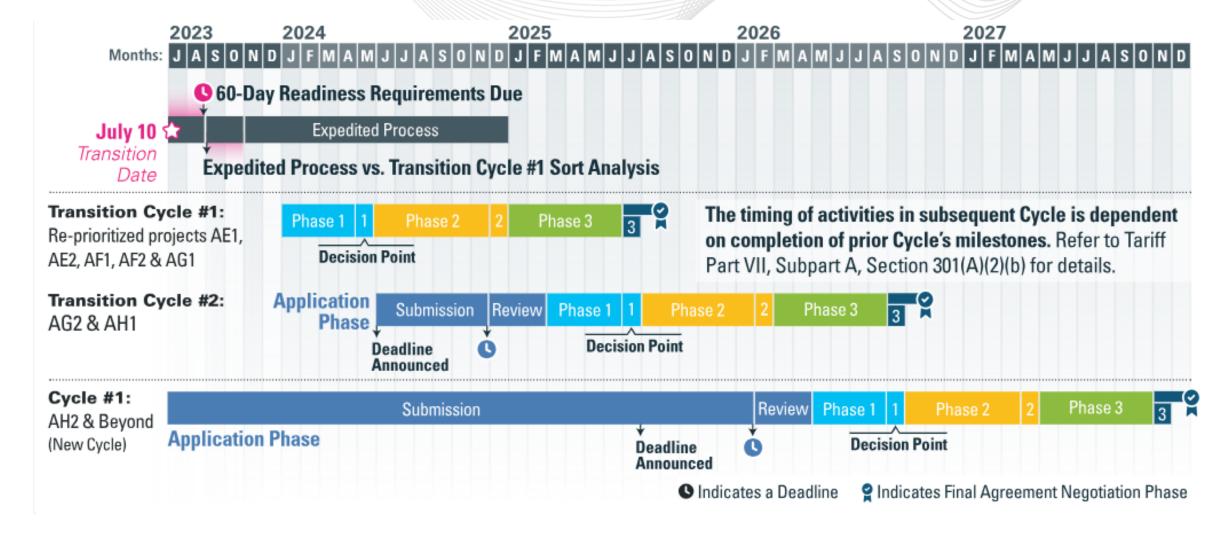


# Interconnection Analysis Transition Sort Retool & Model Availability

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Interconnection Process Subcommittee
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# Original Schedule





# **Analysis Timeline**

#### **Readiness Review Period**

- Review of active AE1-AG1 projects for readiness requirements
- AE1-AG1 projects will address outstanding questions to fulfill readiness requirements

#### Developers Notified

of Expedited Process Eligibility

## **Refreshed Expedited Process Retool**

- TC1 projects will be lifted from Expedited Process study cases (AE1-AG1)
- Expedited Process projects will be retooled w/o TC1 projects

**Sept.** 2023

Oct. 2023

**Nov.** 2023

**Dec.** 2023

Jan. – Apr. 2024

# **Expedited Processing Eligibility (Transition Sort Retool)**

- AE1-AG1 projects that have met readiness requirements will receive "Expedited Processing Eligibility Analysis" to sort projects into Expedited Process or TC1.
- Each queue will be analyzed on their own SIS study case

## **Transition Cycle #1 Analysis**

Phase I analysis begins for final cohort of TC1 projects coming out of Transition Sort Retool

July-December 2023: Transition Cycle #1 Model Building (LF, SC, Stability)



# Transition Sorting: Expedited Process vs. TC1

# Transition Sort Retool (Oct-Nov-Dec 2023)

- Serial Study Process
- AE1-AG1 'Case Freeze' as of 10/2/23 for projects not subject to readiness review.
- AE1-AG1 projects that have not meet readiness requirements will be removed from the cases.
- The transition sort retool is only used to determine the disposition of the Expedited Process vs. TC1 study track for projects in the AE1-AG1 queues that have met readiness eligibility requirements
- Only Load Flow analysis is completed for the transition sort retools (SP/LL)
- A project is not eligible for the expedited process if it has cost allocation or is first-tocause for a network upgrade that has a total estimated cost > \$5 mil



# Transition Sort Retool Reports: Expedited Process vs. TC1

- Transition Sort Retool Reports (anticipated mid-Dec 2023)
  - Transition Sort Retool Reports will all be simultaneously posted on pjm.com
    - Report serves to identify classification of projects as either Expedited Process or TC1
    - https://www.pjm.com/planning/service-requests/fast-lane-tc1-classification
- Pardot Announcement\* 1 (December): Released prior to the posting of the Transition Sort Retool Reports on pjm.com. Will communicate an expected date that the reports will be available.
- Pardot Announcement\* 2 (December): Released the day that the Transition Sort Retool Reports are posted on pjm.com. Will notify all that the reports are available.

\*Pardot Announcement will be sent to the IPS, IWG and Queue Point distribution lists.

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# Transition Sort Retool Reports: Format

## **Transition Sort Retool Reports:**

- Not meant to be a formal System Impact Study
- Purpose is to communicate whether a project is determined to be either:
  - (i) eligible for the Expedited Process or
  - (ii) reprioritized to Transition Cycle 1.
- Report will include a list of:
  - (i) the overloaded facilities identified,
  - (ii) other interconnection projects that may also contribute to the overloaded facility, and
  - (iii) the total estimated cost for any required Network Upgrades (no cost allocation provided).



## Refreshed Expedited Process Retool (Dec 2023 start – parallel with TC1)

- Serial Study Process & Cost Allocation Criteria
- AE1-AG1 cases updated with any withdrawals to date.
- Once the Expedited Process & TC1 tracks are determined, the TC1 projects are lifted from the AE1-AG1 cases to run the Expedited Process analysis
- Load Flow, Short Circuit, and Stability will be completed for Expedited Process eligible projects during retool
- If Stability is already complete, it is not expected to be re-run (unless violation previously identified)
- Based on final analysis results (LF/SC/Stability) and Facility studies, any projects that do receive cost allocation for network upgrades > \$ 5mil will shift to TC1 (Includes TO analysis results)
- Expedited Process projects will receive SIS report after all analysis is completed, followed by Facilities Study Report (if required) and final GIA/WMPA.



### Transition Cycle #1 (2024-2025) –

- Anticipated to start January 2024
- Contains AE1-AG1 projects that were not eligible for the Expedited Process
- No project priority → studied as a cluster under new study process
- Studied on 2027 RTEP base case
- Load Flow analysis will be completed for SP/LL using <u>legacy</u> GenDeliv test
- Short Circuit and Stability analyses will be completed using cluster study methodology

## Transition Cycle #2 (2024-2026)

- Contains final cohort of valid AG2-AH1 projects → AG2-AH1 projects need to re-apply under the new rules to be eligible for TC2
- No project priority → studied as a cluster under new study process
- Anticipated to be studied on 2028 RTEP base case
- Load Flow analysis will be completed for SP/WP/LL using new GenDeliv test
- Short Circuit and Stability analyses will be completed using cluster study methodology

## • Cycle #1 (2025-2027)

- Contains valid AH2 projects and beyond → AH2 and beyond projects need to apply under the new rules to be eligible for Cycle 1
- RTEP base case year is TBD
- Same study approach as TC2



# Load Flow Model Details & Target Availability

- Transition Sort Retool Models (Post #1) -
  - Models will be built on SIS Impact Models and consist of active AE1-AG1 projects before sorting
    - AE1/AE2 Posted October 31st
    - AF1/AF2 AF1 Posted November 13<sup>th</sup>/AF2 anticipated by end November
    - AG1 December
- Refreshed Expedited Process Models (Post #2) December/January
  - Models will be built on SIS Impact Models and only consist of AE1-AG1 Expedited Process projects only, all TC#1 projects are removed from these models
- Transition Cycle #1 Model Post January 2024
  - Model will be built on 2027 RTEP Model and consist of active AE1-AG1 projects

#### **Availability:**

- <u>AE1/AE2/AF1/AF2/AG1 cases and files will be posted to PJM website CEII Access Required</u>
- TC1 case and files will be posted to the PJM Website CEII Access Required



# Study Approach Reference Guide

Category	Study	Type of Analysis		RTEP Base Case Year		Study Approach	Generator Deliverability Method	Cost Allocation
Expedited Process	Transition Sort Retool¹ Purpose: Determine Expedited Process vs. TC1	Load Flow <sup>2</sup>		AE1/AE2	2022	Serial	Legacy GD	Serial
				AF1/AF2	2023			
				AG1	2024			
	Refreshed Expedited Process Retool <sup>3</sup> Reason: Lift TC1 projects from model	Load Flow <sup>2</sup>		AE1/AE2	2022	Serial	Legacy GD	Serial
		Short Circuit		AF1/AF2	2023			
		Stability <sup>4</sup>		AG1	2024			
Transition	Transition Cycle 1	Load Flow	Phases 1-3	New AE1-AG1 2027	2027	Cluster	Legacy GD	Cluster
Cycles		Short Circuit	Phases 2-3					
		Stability	Phases 2-3					
	Transition Cycle 2 <sup>5</sup>	Load Flow	Phases 1-3	New AG2-AH1	2028 (anticipated)	Cluster	New GD <sup>6</sup>	Cluster
		Short Circuit	Phases 2-3					
		Stability	Phases 2-3					
New Cycle	Cycle 1	Load Flow	Phases 1-3	AH2 +	TBD	Cluster	New GD <sup>6</sup>	Cluster
		Short Circuit	Phases 2-3					
		Stability	Phases 2-3					



# Study Approach Reference Guide (Cont'd)

- <sup>1</sup> The transition sort retool is only used to determine the disposition of the Expedited Process vs. TC1 study track for projects in the AE1-AG1 queues
- <sup>2</sup>Load Flow studies will be run on both <u>summer peak</u> and <u>light load</u> model conditions
- <sup>3</sup> PJM M14H, Appendix I.3.4, **Expedited Process Rules** will apply for the Refreshed Expedited Process Analysis
  - Short Circuit / Stability Analysis: If a short circuit, stability analysis, or sag study is completed during the expedited process, and it is
    determined that a reinforcement project is required that has an estimated Network Upgrade cost greater than \$5,000,000, the project will be
    removed from the Expedited Process and shifted to Transition Cycle #1
  - **Facilities Study Estimates:** If it is determined during the Facilities Study that the cost of a Network Upgrade is now estimated to be greater than \$5,000,000, the project will be removed from the Expedited Process and shifted to Transition Cycle #1
  - Until the Project Developer receives a draft GIA, they are subject to being shifted to TC1 for any of the reasons above
  - GIA: Projects in the Expedited Process will have their Facilities Studies completed, and will be tendered an interconnection-related service agreement pursuant to Tariff, Part IX
- <sup>4</sup> PJM will apply updated model conditions to stability studies not yet performed at this stage. Stability will not be re-run if a project already received results
- <sup>5</sup> Load Flow studies are projected to be run on Summer Peak, Winter Peak, and Light Load models starting with Transition Cycle 2 and beyond
- <sup>6</sup> The new Generator Deliverability procedure was endorsed at the January 2023 MRC and is outlined in M14B



# Updated Dynamic Model Data – TC1 projects

- AE1-AG1 projects that are determined to be classified as TC1 will have the opportunity to submit updated dynamic model data to PJM prior to TC1/DP1 in accordance with the PJM Dynamic Model Development Guidelines.
- PJM will reach out to TC1 Project Developers via Pardot Announcement once they are able to submit updated data.
- Project Developers will need to follow the Dynamic Model Development Guidelines document posted on PJM.com (<a href="https://www.pjm.com/-/media/planning/services-requests/pjm-dynamic-model-development-guidelines.ashx">https://www.pjm.com/-/media/planning/services-requests/pjm-dynamic-model-development-guidelines.ashx</a>)



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