

# Queue Scope Tool Update Geospatial Application

As of November 16, 2023

## Completed in 2022

- Tabular App Go-Live was Monday December 5
- Located under Planning Center tools page on PJM.com

## Upcoming in 2023

- Geospatial App Go-Live targeted for mid-December
- Will be Added to Queue Scope Tool page on PJM.com

## PJM.com Updates

- Geospatial App will be accessible via the existing Queue Scope section on the Planning Center tool page: <https://pjm.com/markets-and-operations/etools/planning-center>)
- Geospatial App is only available with a valid PJM account and granted access. Uses the same roles as Tabular App.



**Tabular Application**  
 Production: [Sign In](#) | [Register](#) | [Public Sign In](#)  
 Train Environment: [Sign In](#) | [Register](#) | [Public Sign In](#)

**Geospatial Application**  
 Production: [Sign In](#) | [Register](#)  
 Train Environment: [Sign In](#) | [Register](#)

## Official Tool Name: **Queue Scope**

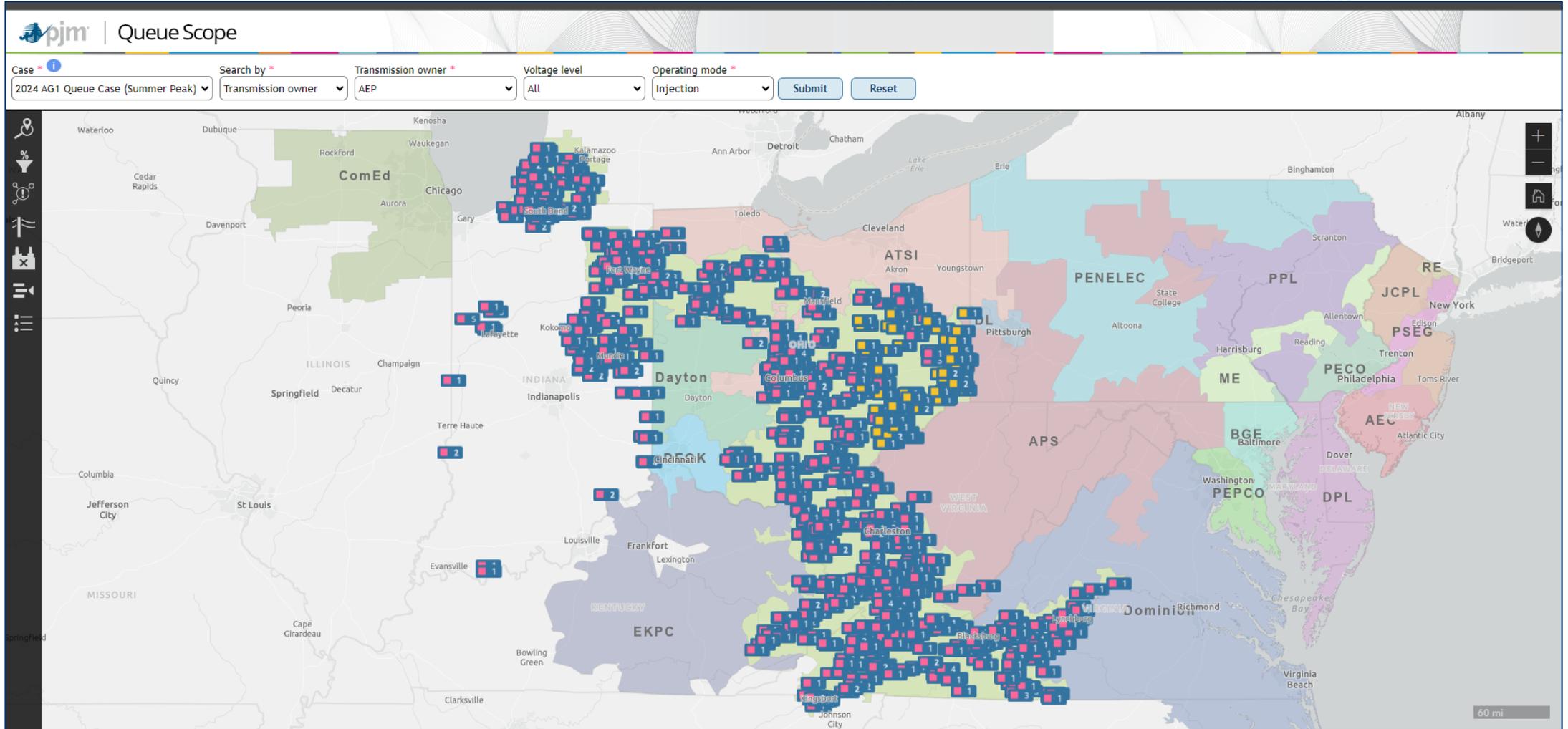
**DESCRIPTION:** The screening tool enables users to evaluate placement of future generators even before formally entering the PJM queue. The tool screens potential points of interconnection (POI) on the PJM system by assessing grid impacts based on the amount of MW injection or withdrawal at a given POI.

### Tool Functionality

- Capabilities**
- Provides the ability to assess all types of generation (including batteries, pumped hydro, MTX)
  - Leverages stored results from PJM generator deliverability analysis
  - Provides facility loading impacts and headroom (MW) by POI
  - 6000+ POI buses available to users within the PJM footprint
  - Users have the option to run the analysis with a Transmission Planning case or Queue Study case

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- Limitations**
- No short circuit, voltage or stability analysis. Thermal overloads are the typical constraint.
  - Currently limited to Summer Peak analysis. Future plans to include Light Load analysis.

- **Phase 1 – Tabular User Interface (COMPLETE)**
  - This phase of the project included database & application development
  - Application go-live in production was in Dec 2022
  - Tool is accessible from the Planning Center Tools page on PJM.com
  
- **Phase 2 – Geospatial User Interface (IN-PROGRESS)**
  - Targeting for a Dec 2023 go-live in production (pending final testing)
  - Will leverage similar capabilities/feel of the existing PJM system map along with Tabular App workflow
  - Provides users with visual cueing for grid impacts
  - Tool will be accessible from the Planning Center Tools page on PJM.com just like the Tabular App
  - Now a requirement under FERC Order 2023



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## Queue Scope



## Member Hotline

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**PROTECT THE  
POWER GRID**  
**THINK BEFORE  
YOU CLICK!**



Be alert to  
malicious  
phishing emails.

**Report suspicious email activity to PJM.**  
(610) 666-2244 / [it\\_ops\\_ctr\\_shift@pjm.com](mailto:it_ops_ctr_shift@pjm.com)



# Back-Up Slides



Case \* i 2024 AG1 Queue Case (Summer Peak) ▾

Search by \* Transmission owner ▾

Transmission owner \* Select a Transmission Owner ▾

Voltage level ▾

Operating mode \* Injection ▾

Submit Reset

AE  
AEP  
AP  
ATSI  
BGE  
CE  
DAY  
DEO&K  
DLCO  
DP&L  
DVP  
EKPC  
JCPL  
METED  
OVEC  
PECO  
PENELEC  
PEPCO  
PJM

Once TO is selected, the voltages are populated for selection. Default is "All"

TO List will populate once case is selected and Transmission owner is selected in Search by feature

Case \* i 2024 AG1 Queue Case (Summer Peak) ▼

Search by \* Bus name/Bus number ▼

Bus name/Bus number \* juni ▼

Operating mode \* Injection ▼

Submit Reset

02JUNPE-(238850)  
JUNI BU1-(208004)  
JUNI BU2-(208005)  
JUNIATA-(200009)

Once case is loaded and Bus name/Bus number is selected in Search By field, the search field is available for use

Queue Scope

Case  ⓘ

2024 AG1 Queue Case (Summer Peak)  ▼

Search by  \*

Transmission owner  ▼

Transmission owner  \*

AP  ▼

Voltage level

All  ▼

Operating mode  \*

Injection  ▼

Submit

Reset

**Select Buses to Study** ✕

Select buses to add them to the study queue.

	Bus Name (Bus #)	Pre-Loading (%)
<input checked="" type="checkbox"/>	POTTER 115 KV (235234)	181.5

Add

Zoom to

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Substation Name POTTER

Transmission Owner AP

Number of Buses 1

Once the substation is selected in the map, the user has the ability to select POI buses and add them to a study

Once workflow is complete and Submit is selected, all of the substation symbols in the TO footprint will load.

This is a hover pop-up for the substation symbol

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ing mode \*

on

Submit Reset

Zoom to

Substation Name	POTTER
Transmission Owner	AP
Number of Buses	1

### Selected Buses

Desired MW \*

100 Run Study

<input type="checkbox"/>	Bus Name (Bus #)	Pre-Loading (%)	
<input checked="" type="checkbox"/>	01POTTER 115 KV (235234)	181.5	

Reset

**Evaluation Results** 🔍 - ↗ ✕

Ability to select different POIs run in the study
Same Results Table Presented in Tabular App
Export

Transmission Facility	Contingency Name	Contingency Type	Rating	Available (MW)	DFax	Impact (MW)	Impact (%)	Pre-Loading (%)	Post-Loading (%)
		All ▾							
966040 AG1-473 TAP 230 200513 26LEWISTWN 230 1	Base Case	Operational	520	0	0.104	10.4	2	■ 190.76	■ 192.76
235248 01SHINGL 230 966040 AG1-473 TAP 230 1	Base Case	Operational	520	0	0.104	10.4	2	■ 184.1	■ 186.1
235203 01KISSNG 138 235197 01KARNSC 138 1	ATSI-P2-3-CEI-345-004D	Breaker	268	0	0.063	6.3	2.35	■ 181.52	■ 183.87
235203 01KISSNG 138 235197 01KARNSC 138 1	PN-P1-2-PN-345-107T	Operational	268	0	0.065	6.5	2.43	■ 180.75	■ 183.18
966040 AG1-473 TAP 230 200513 26LEWISTWN 230 1	AP-P2-2-WP-230-001T	Bus	621	0	0.067	6.7	1.08	■ 173.41	■ 174.49
966040 AG1-473 TAP 230 200513 26LEWISTWN 230 1	PN-P2-3-PN-115-59B_A	Breaker	621	0	0.115	11.5	1.85	■ 173.1	■ 174.95
966040 AG1-473 TAP 230 200513 26LEWISTWN 230 1	PN-P1-2-PN-230-020A	Operational	621	0	0.107	10.7	1.72	■ 167.32	■ 169.04
235248 01SHINGL 230 966040 AG1-473 TAP 230 1	AP-P2-3-WP-230-446T	Breaker	621	0	0.067	6.7	1.08	■ 167.3	■ 168.38

Case \* i Search by \* Transmission owner Select

Navigate to Coordina... x

Ex. 40.71,-74.006

Submit

Search by Lat/Long using decimal coordinate format

Case \* i Search by \* Transmission owner Select

Pre-Loading Status F... x

Status

- 100%+
- 90-100%
- 0-90%

Custom

From 0 To 100 %

Reset

Pre-Loading Status Filter is used to filter POIs presneted in the map

Case \* i Search by \* Transmission owner Select

Congestion Overlay x

Show Pre-Load Overlay

Loading Percentage

0 175+

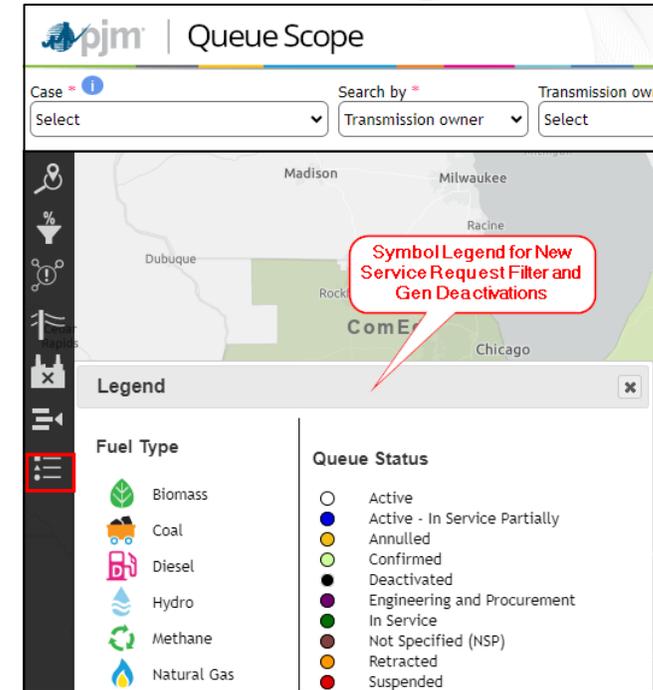
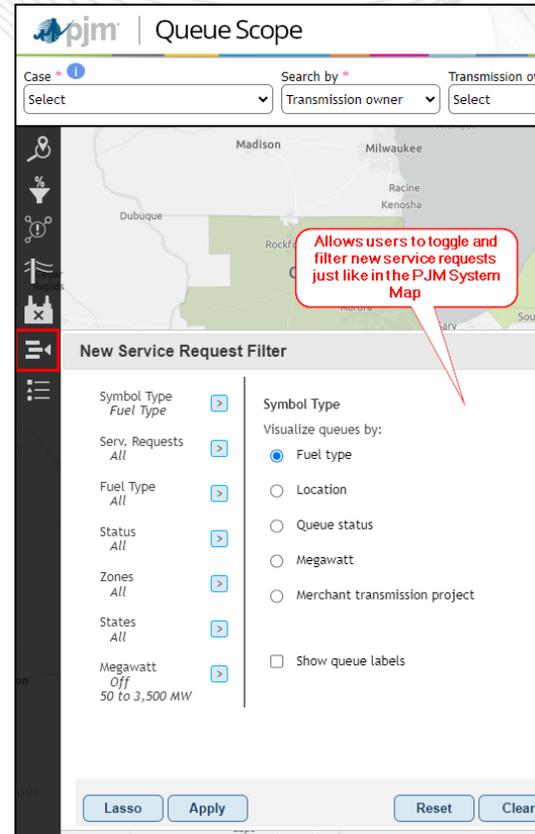
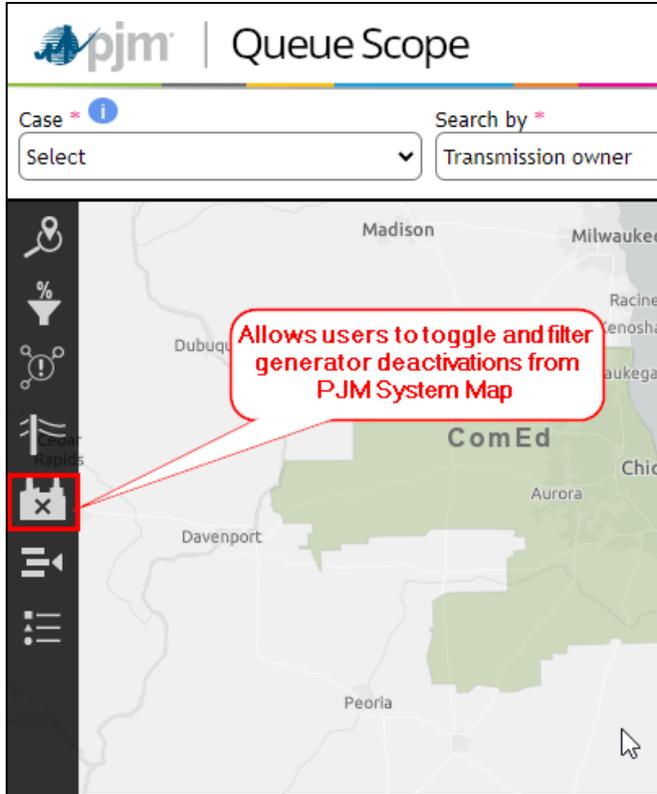
Congestion Overlay control allows user to turn ON & OFF. Also provides color gradient for POI pre-loading (%)

Case \* i Search by \* Transmissi Select

kV Filter x

- All
- 69
- 115
- 120
- 138
- 161
- 230
- 345
- 500
- 765
- HVDC

Allows users to toggle transmission lines in the map



Case <sup>1</sup> 2025 RTEP Base Case (Summer Peak) Search by \* Transmission owner \* AEP Voltage level All Operating mode \* Injection

