



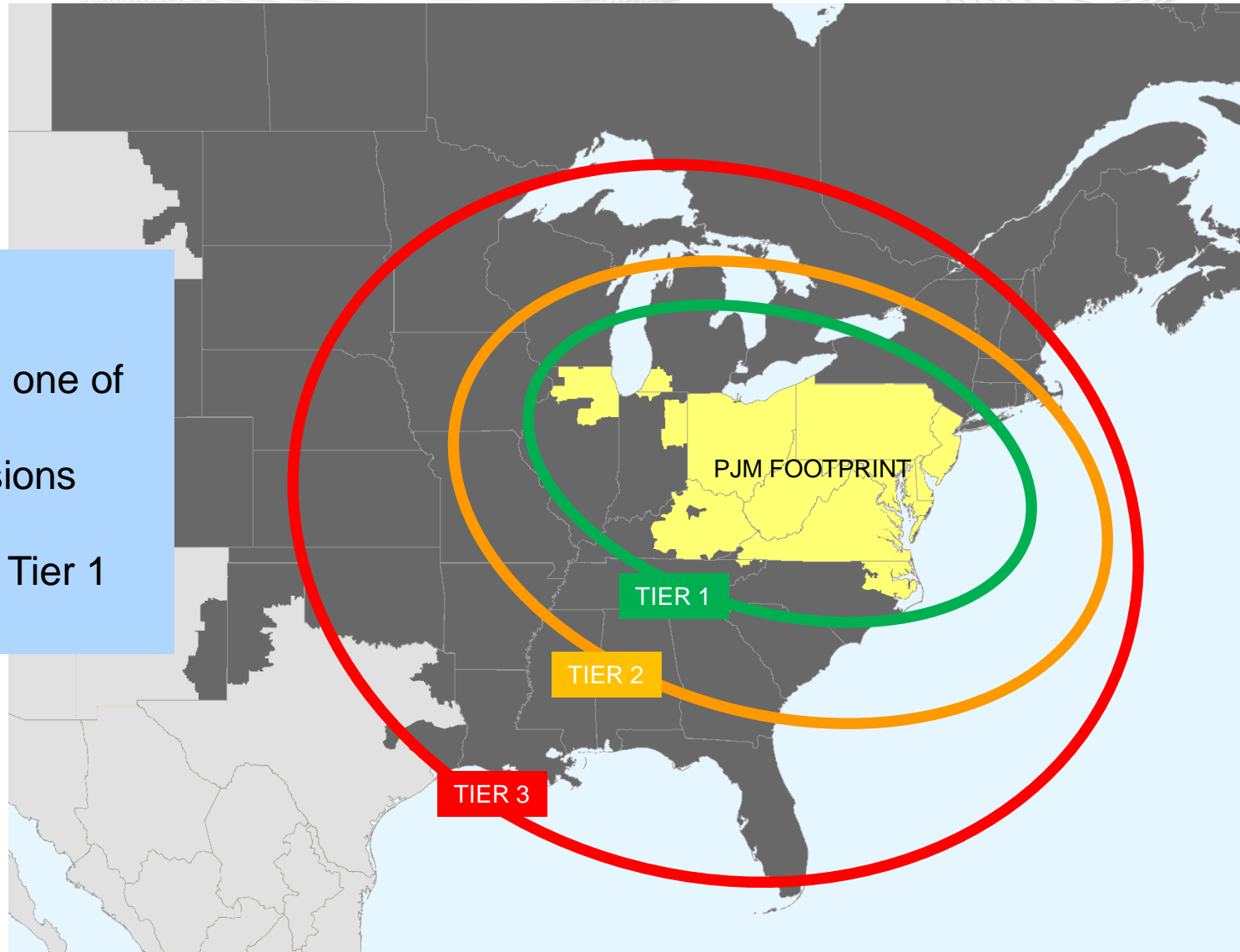
# Electrical Distance Calculator Update

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PJM Operations Support

- Clarification of Electrical Distance Proposal
  - Review of maps of Propose Tiers
- Next Steps
  - Average Distance vs. Minimum Distance
- Updated Proposal Language

## ECPE Matrix Description

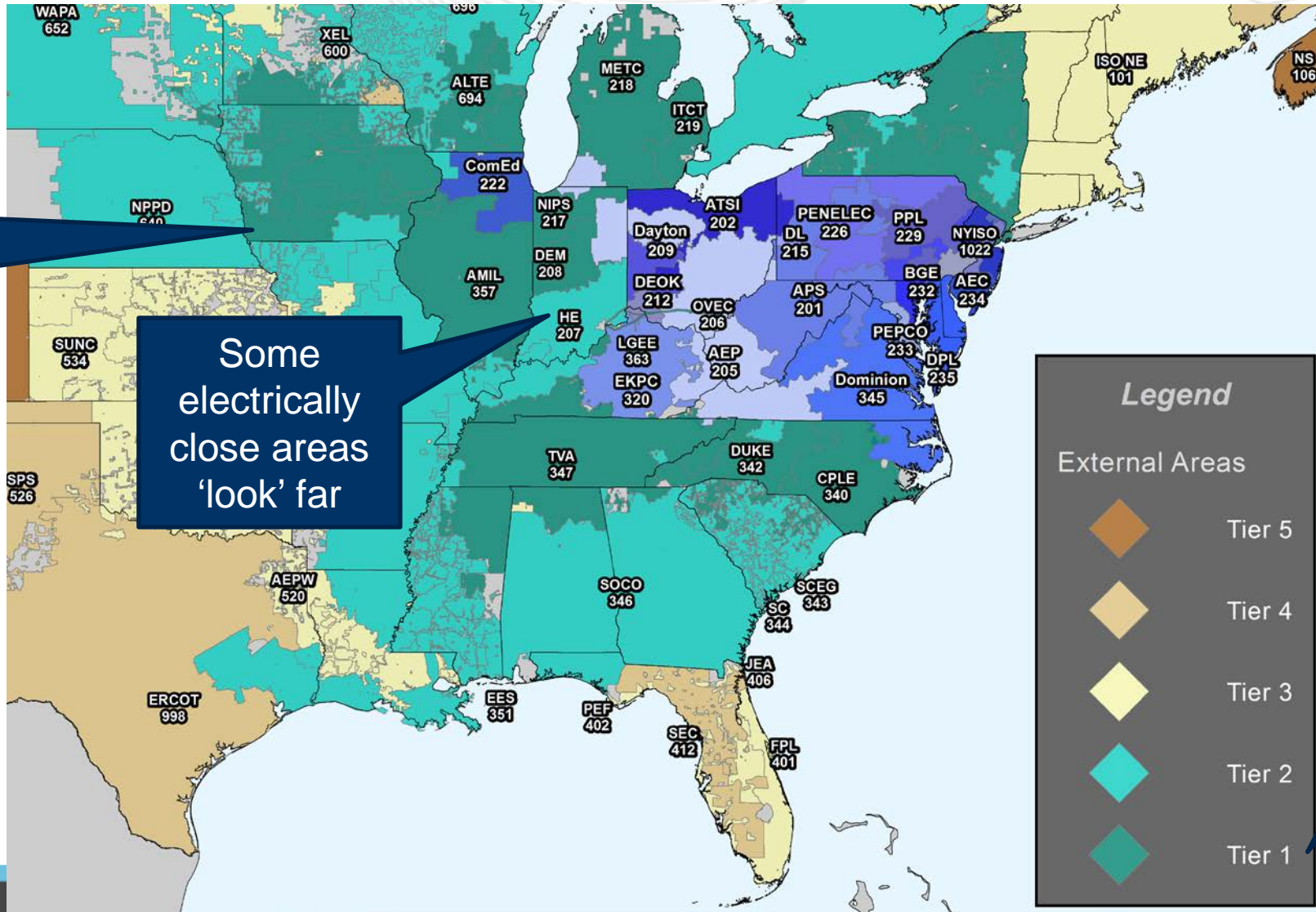
Resources physically located one of the following areas:  
(1) in Tier 1 with some exclusions based on electrical distance  
(2) in Tier 2 AND close to the Tier 1 border



# Refined Geographic Tier Diagram (Based on Planning Base Case Areas)

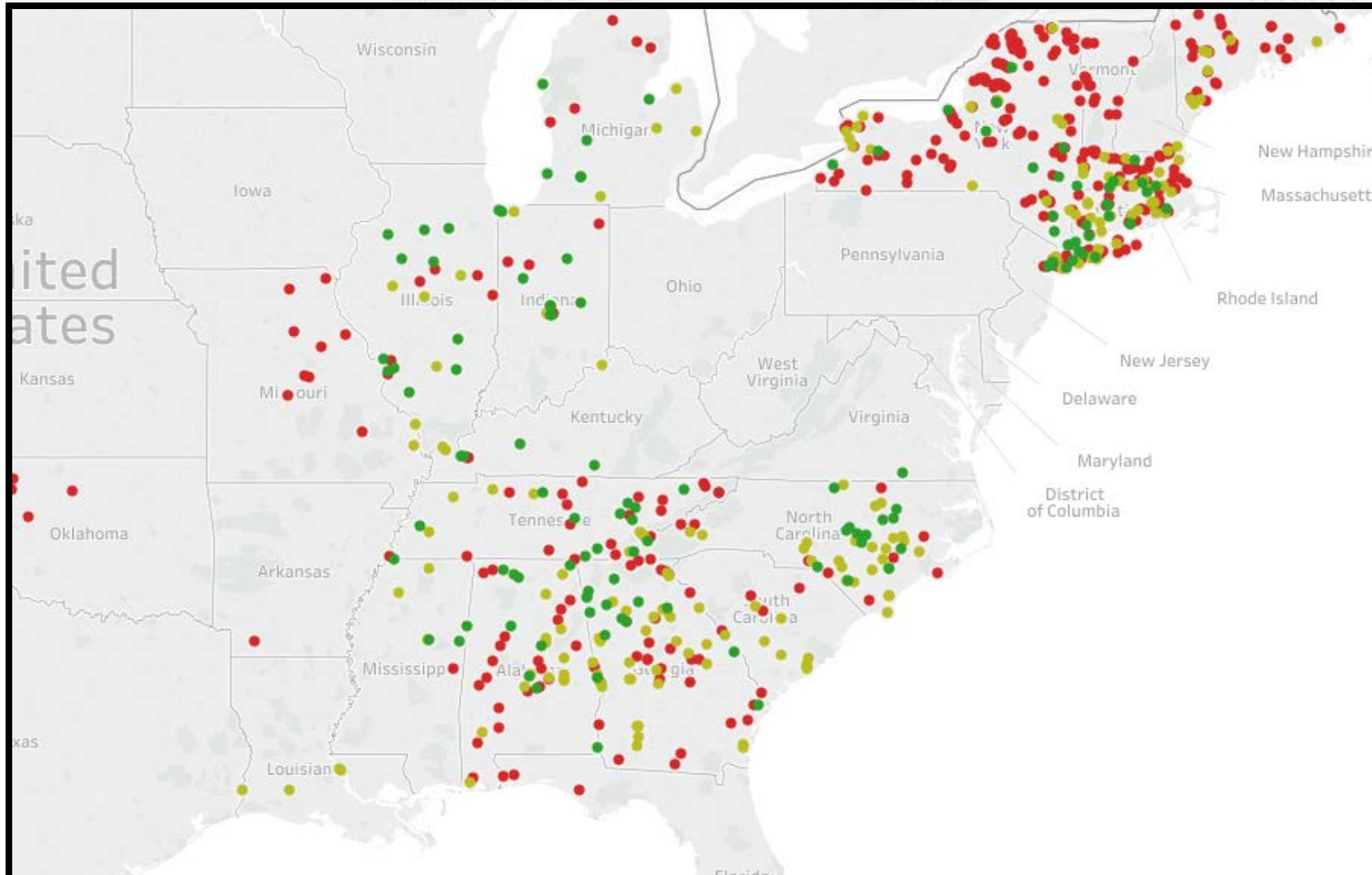
Some electrically far areas 'look' close

Some electrically close areas 'look' far



Tier 1 includes >160,000 MW of generation

# Preliminary Minimum Electrical Distance Results



	Electrically Close		Electrically Far
Minimum Zth	$\leq 0.065$	0.065-0.12	$> 0.12$

- Initial criteria established for *Minimum Electrical Distance impedance*
  - Pseudo-Tie can be established for external resources within an impedance equal to or less than 0.065
- Opportunity exists to include additional external resources based on *Average Electrical Distance impedance*
  - An average criteria better correlates with risks associated with model expansion
  - PJM will continue to develop the Average Electrical Distance methodology

A Pseudo-Tie can be established for external resources with a minimum Electrical Distance impedance equal to or less than 0.065 and/or an average Electrical Distance impedance equal to or less than Y.