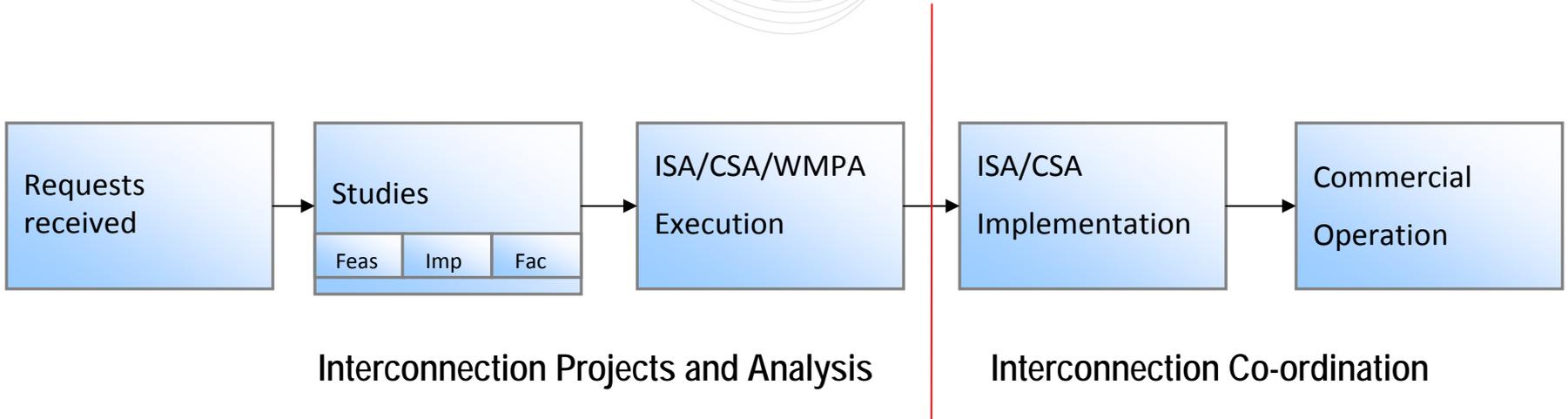


# Review of Required Upgrades

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FERC Technical Conference in AD12-17  
July 17, 2012



- Projects may drop out of the queue at any time
- Project size may be reduced but not increased
- Projects are withdrawn from the queue if they miss milestones or financial obligations

- Scoping meeting to discuss project, pick point of interconnection
- Studies:
  - Feasibility Study
  - Impact study (may be combined with Feasibility Study)
  - Facilities Study
    - Typically not needed for solar projects except when a Transmission Owner (“TO”) wishes to conduct a time-based dynamic study
  - Interconnection Customers (“ICs”) (both large and small) can request a meeting to discuss results of studies
    - PJM’s experience is that meetings to discuss study results occur often, including for solar projects
    - IC’s receive the relevant case information upon request

- PJM’s recent queue reforms are intended to alleviate bottlenecks in the queue for both large and small projects
- Example: “alternate queue” for projects  $\leq 20$  MW that do not impact the transmission system will ensure study process for small projects is not tethered studies of larger projects

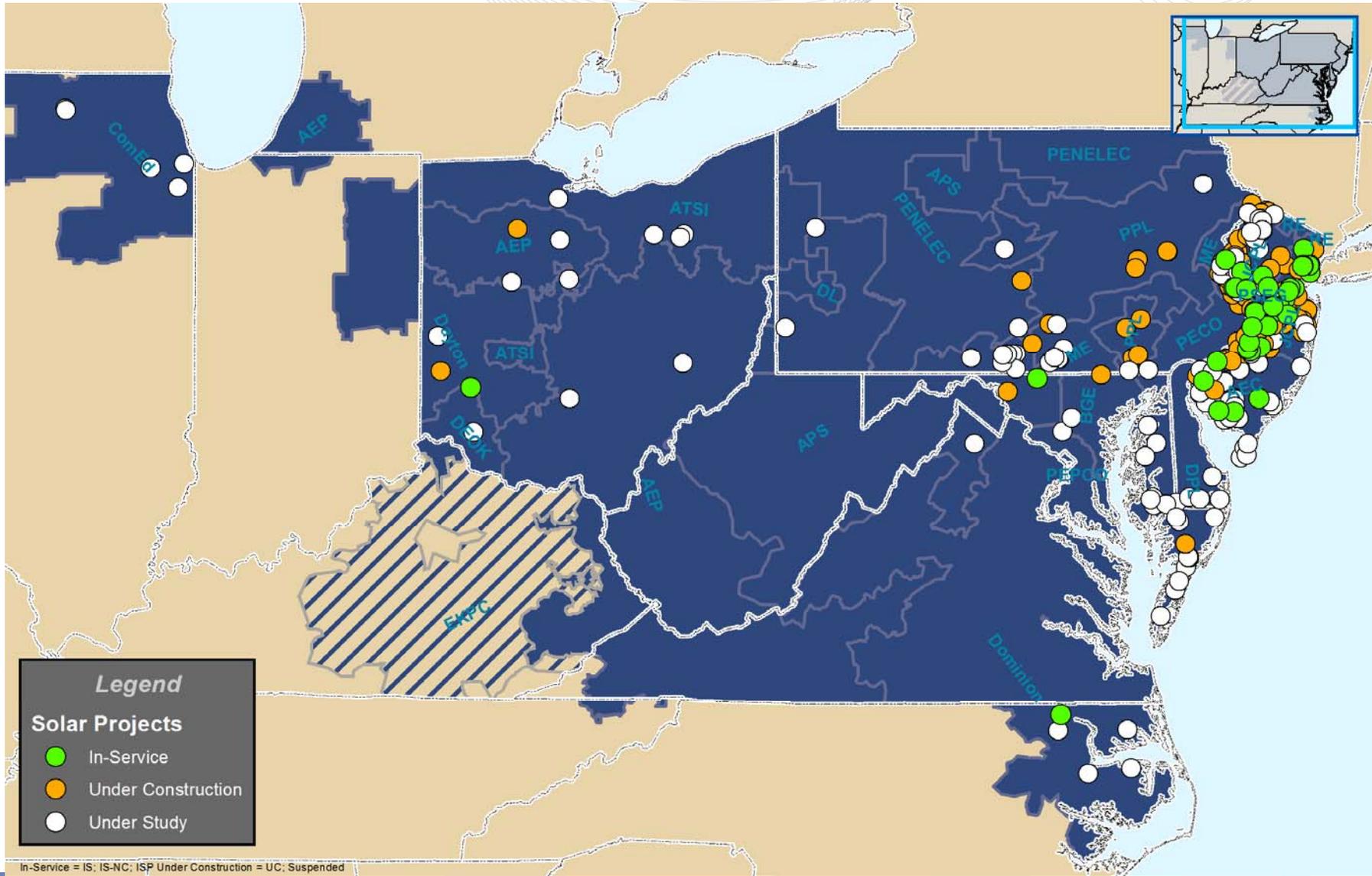
## Total projects in the queue since 1999 through the X4 queue 2011 RTEP Report (Includes solar)

Currently Active		In Service/Under const		Withdrawn	
MW	# of projects	MW	# of projects	MW	# of projects
74,254	544	42,237	586	222,056	1,005

## Total solar projects in the queue since 2007 through the X4 queue 2011 RTEP Report

Currently Active		In Service/Under const		Withdrawn	
MW	# of projects	MW	# of projects	MW	# of projects
2,455	213	3,114	137	2,902	258

- Solar projects in PJM footprint primarily in Mid-Atlantic with the greatest volume in NJ
- Approximately 85% of solar seek to interconnect to distribution/sub-transmission
- Typically, no Network Upgrades; just Attachment Facilities
  - PJM anticipates most solar projects will be in the alternate queue



- In PJM, IC's may (and do) seek 3<sup>rd</sup> party review of study results
- Open dialogue regarding results and 3<sup>rd</sup> party review
  - 3<sup>rd</sup> party review & discussion conducted before next phase of studies begin

- ICs should have ability to comment on studies
- In PJM, all ICs have the opportunity to request a meeting to discuss study results.
  - Email communications
  - Phone conferences
  - In-person meetings

# Questions?