Internal Network Integration Transmission Service (NITS) Education

Susan McGill
Jeff McLaughlin
Julia Spatafore

Operating Committee
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Education Outlined in the Issue Charge

- Differences between cross-border and internal NITS (Jeff McLaughlin)
- Challenges with today's pro forma language for internal NITS (Susan McGill)
- Transmission planning activities for internal load (Julia Spatafore)

Cross-Border Service vs Internal NITS

- Cross-Border Service
  - External generator wants to participate in PJM Capacity Market
  - Transmission Service procured on PJM OASIS, decrements Available Transfer Capability (ATC)
  - Studied for deliverability, coordinated with neighboring systems, modeled as transfer in the PJM RTEP case and industry models
  - May decide to cease participating in RPM, elect to deliver capacity to another market, terminate service rather than roll-over

- Internal NITS
  - PJM native load being served by internal generation
  - PJM performs generation and load deliverability studies annually
  - ALL native load has already been identified to be served reliably

Internal NITS

- Internal NITS can best be described as the ‘power pool’ service under the PJM construct

- Non-optimal 1990’s OATT pro-forma language:
  - Lacks clarity between border and internal service
  - Current Internal NITS process not reflected well
  - Imperfect alignment with PJM construct that has been in-place since Open Access Orders took effect (1996/97 timeframe)
  - Valueless procedure for members to rollover internal NITS agreements

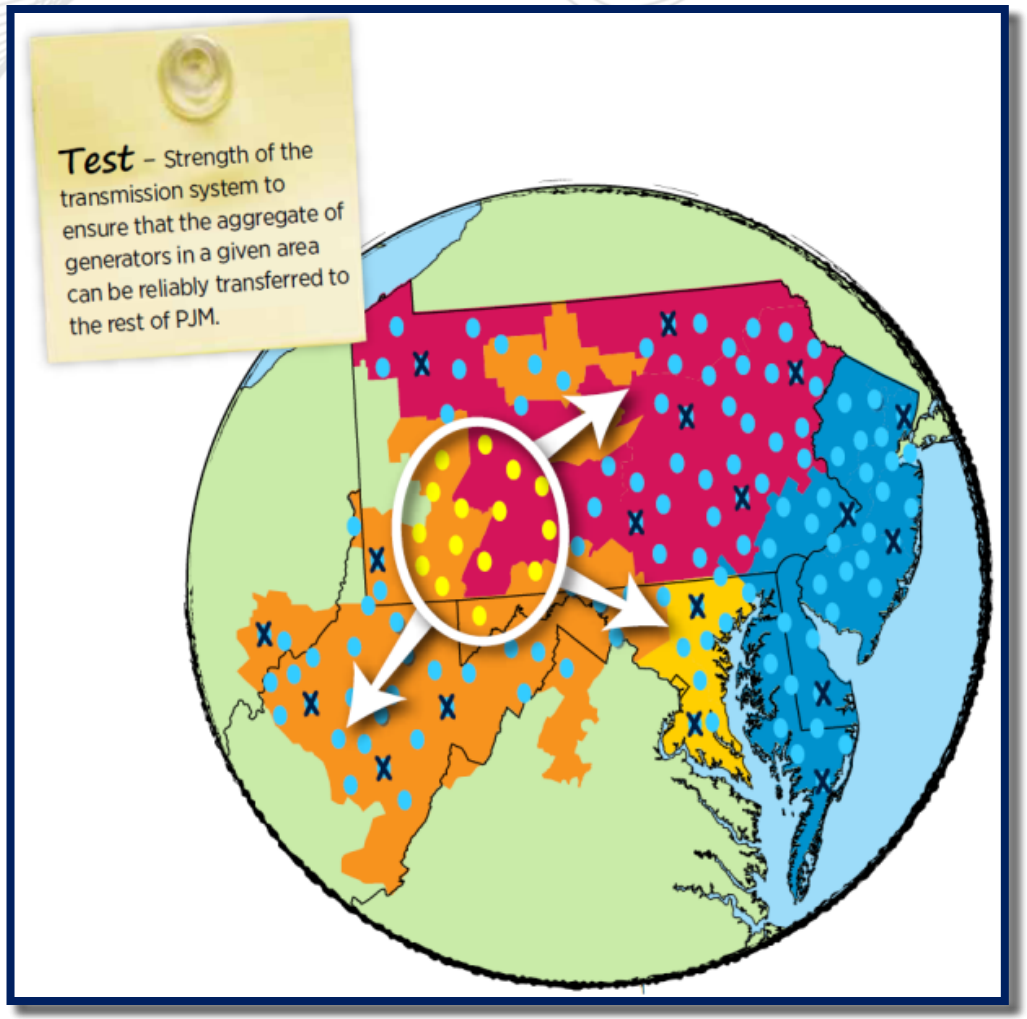
- Analytical processes are sufficient but administrative process as currently written associated with Internal NITS is less than ideal.

Internal NITS Challenges

- Rollover – requires customers to notify PJM 1-year in advance of expiration of service
- “New” requests for internal NITS required to follow the same analysis and evaluation under the pro forma Tariff provisions
- Inconsistencies between the pro forma language and the PJM market construct

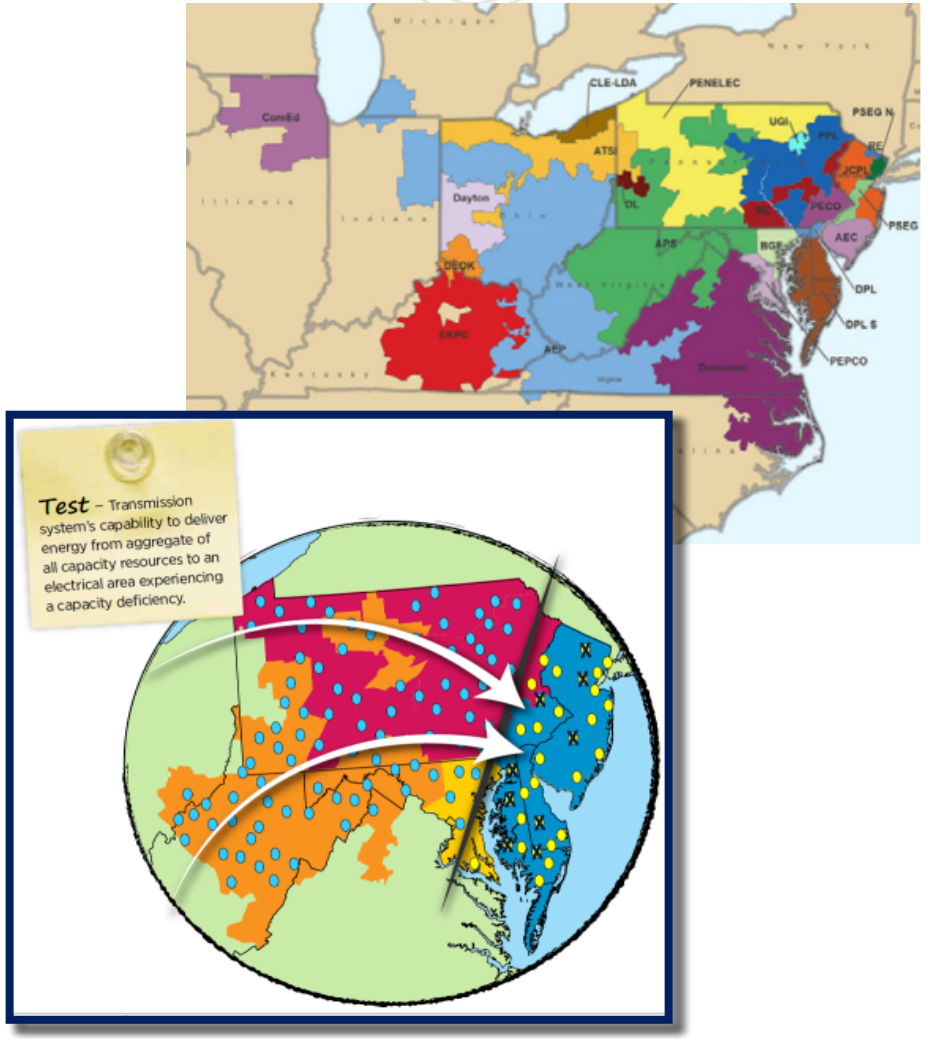
Generator Deliverability Test

- Transmission Capability Generation → Rest of PJM load
- Stressed generation dispatch is created for each monitored element + contingency pair (flow gate)
  - The generation dispatch is unique for each flow gate
- Summer, Winter and Light Load cases are used for the study
- If violations are identified, baseline projects will be developed



Load Deliverability Test

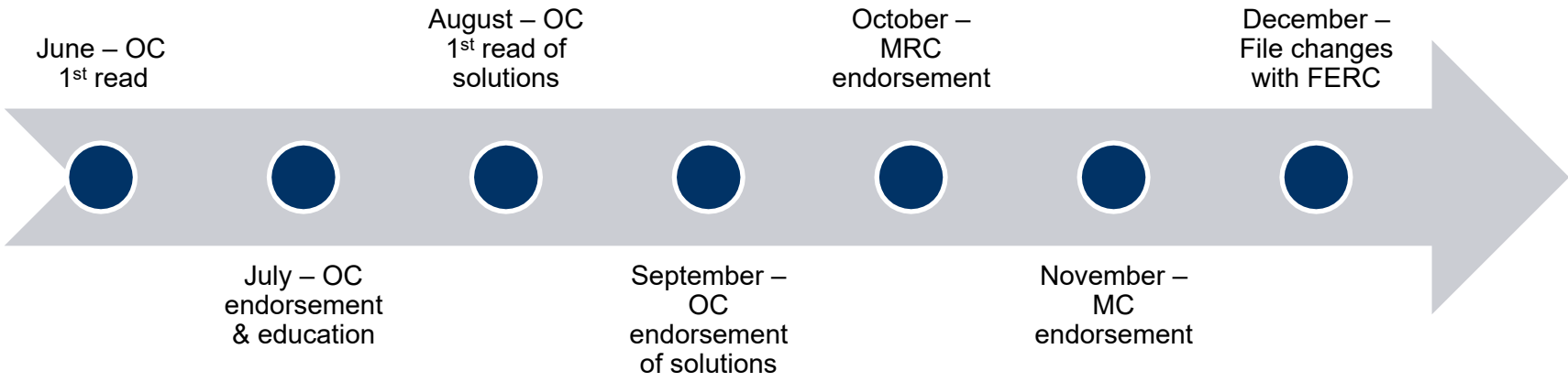
- Transmission Capability:
  Generation → Capacity Deficiency Area
- Capacity Emergency Transfer Objective (CETO): Amount of import capability under peak load emergency conditions into a defined area to maintain a 1-event-in-25-years reliability criteria
  - PJM is divided into 27 Load Deliverability Areas (LDAs). Each LDA is evaluated separately.
  - 1-in-25 reliability criteria index refers to the frequency with which the LDA would shed load due to insufficient import capability only.
- Capacity Emergency Transfer Limit (CETL): Measured against the CETO to determine system ability to import capacity into an LDA under peak load emergency conditions
- If CETL < CETO
  - Additional transmission capability is needed and baseline project(s) will be developed.



Next Steps

- PJM-developed matrix posted for information along with meeting materials.

- Anticipate Tariff redlines by the September Operating Committee



Contact

Presenter:
Susan McGill,
Susan.McGill@pjm.com

Jeff McLaughlin
Jeffrey.McLaughlin@pjm.com

Julia Spatafore
Julia.Spatafore@pjm.com

Internal NITS Process Education

Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

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