



December 2018 LMP Model Build Follow-up

Markets Applications

- The December 2018 LMP model build resulted in pnode ID values that exceeded the Java 32-bit *int* data type threshold
- The new pnode ID values caused issues for PJM and participant systems
- Pnode IDs are generated using sequences that are shared across multiple tables in the Market databases - pnode ID values can increase significantly between model builds
- To resolve the issue, PJM altered systems to process pnode IDs using larger data types (i.e. Java *long*). Participants made similar changes to accommodate the new pnode ID values.
- At the December 2018 Tech Change Forum meeting, participants requested additional clarification and follow-up



PJM LMP Model Build Process

PJM publishes LMP model network information on pjm.com. Pnode IDs are not included.

Pnode IDs for new pnodes are generated during the model build

14 days prior to production model build

Production model build



14-10 days prior to model build

Morning after model build

PJM begins testing the model build process

PJM publishes new Pnode IDs to pjm.com

- Strengthen communication during the event
 - In the future, PJM will send member notifications detailing root cause and resolution as soon as practicable
- PJM is pursuing changes to markets systems to slow the growth of pnode IDs values
 - Pnode IDs will continue to grow, but at reduced rate
 - 1:1 mapping between new Pnodes and Pnode ID values
- PJM is investigating how to make Pnode IDs available externally before the build event