

## 2014/2015 Monthly FTR Auction Transmission Outage Modeling

PJM determines the transmission outages to model in the simultaneous feasibility test utilized in each Monthly Balancing of Planning Period FTR Auction using the following procedure. PJM executes the SFT analysis on transmission outages as follows:

1. PJM begins with the initial outage list as it is submitted to PJM by the transmission owners posted on the PJM OASIS. This is a raw list of outages available to the public on the PJM OASIS page. This list is not necessarily a list of approved outages or actual outages that will be occurring as it changes daily and many of the outages are not yet approved. Transmission outages will only be considered in final model if scheduled for at least five days or if identified in step four below.
2. PJM reviews the initial outage list for all PJM transmission zones and identifies outages that are occurring during the period of the FTR auction which do not occur simultaneously. Outages often occur during different times of a month or quarter and would not be approved to occur simultaneously because they would cause reliability concerns. Therefore, PJM models the best representation of outages to reflect the expected conditions of the auction time period.
3. PJM market engineers also review all transmission outages of interest with the PJM interconnection and operations group for the likelihood of the outages actually occurring. In many instances outages are submitted to PJM and posted on OASIS that are not yet approved and will be delayed, cancelled, or rescheduled. Outages might be rescheduled, cancelled, or delayed for reasons such as cancelled transmission upgrades, conflicts with other outages, maintenance cancellations, etc. This information is gathered by the PJM Interconnection Planning department, PJM System Operations department, and the actual transmission owners.
4. PJM market engineers will review the transmission outage list and identify transmission outages that could have a large impact on congestion and possibly FTR revenue adequacy.
5. After this analysis is performed on the initial OASIS outage list and PJM determines the actual outages that will be placed in the optimization program, PJM posts a separate FTR outage list to the FTR web page. This separate FTR outage list is posted publicly before the bidding window opens so that PJM members have a transparent view of the conditions to be used for the optimization program.

PJM must use reasonable assumptions for the topology to be used as part of the optimization program. The goal of the simultaneous feasibility determination shall be to ensure that there are sufficient revenues from Transmission Congestion Charges to satisfy all Financial Transmission Rights obligations for the auction period under expected conditions.

Beginning with the August 2013 Monthly Balancing of Planning Period FTR Auction, PJM may attempt to remove or reduce infeasibilities caused by selected transmission outages.

Infeasibilities are caused because the model representation of transmission outages for any given period is different in the Annual, Long term, and Monthly FTR Auctions. This different representation of transmission outages causes flows from already approved FTRs to exceed facility flow limits. Transmission outages for which PJM may attempt to reduce infeasibilities include the following:

- Transmission outages that have historically caused FTR underfunding.
- Transmission outages on the High Voltage system.
- Transmission outages that create an infeasibility of at least 10%.

PJM may attempt to remove or reduce infeasibilities caused by selected modeled transmission outages only if net monthly auction revenues are positive and ARR full funding is not impacted. PJM will only reduce infeasibilities on facilities in which there are auction bids available to reduce infeasibilities. The below transmission outages may cause infeasibilities on facilities and PJM may attempt to reduce those infeasibilities. 2014/2015 Transmission Outages that may cause infeasibilities for which PJM may attempt to reduce

2014/2015 Transmission Outages that may cause infeasibilities for which PJM may attempt to reduce		
ZONE	FACILITY NAME	TYPE
AE	CHURCHTO230 KV CHU-ORC	LINE
AE	MICKLETO230 KV MIC-MON	LINE
AEP	KANAWHAR345 KV KAN-SPO1	LINE
AEP	MUSKING2345 KV MUS-WAT1	LINE
AEP	TIDD_AEP345 KV TID-WBE1	LINE
AEP	BROADFO2765 KV BRO-JAC1	LINE
AEP	CLOVERD2765 KV CLO-JOS1	LINE
AEP	DUMONT2 765 KV DUM-WIL1	LINE
AEP	HANGING2765 KV HAN-JEF1	LINE
APSS	DOUBS 500 KV DOU-PLV	LINE
APSS	HARR APS500 KV HAR-PRU	LINE
APSS	MEADOWBR500 KV MEA-GRE	LINE
APSS	BELMONT 765 KV BEL-KAM	LINE
APSS	BELMONT 765 KV BEL-MOU	LINE
BC	CONASTON500 KV CNS-PEA	LINE
COMED	138 SILV345 KV 13821	LINE
COMED	22 ZION 345 KV 2218	LINE
COMED	66 E FRN345 KV 6607	LINE
COMED	23 COLLI765 KV 2315	LINE
CPL	3ROCKY 230 KV 2058A	LINE
CPL	WAKE4 500 KV 570B	LINE

DOM-C	CLOVER 500 KV 556A	LINE
DOM-N	LOUDOUN4500 KV 559A	LINE
DOM-N	MORRISVL500 KV 569A	LINE
DOM-N	POSS560 500 KV 560A	LINE
DOM-W	LEXINGTN500 KV 555A	LINE
DOM-W	VALLEY4 500 KV 548A	LINE
DPL	EDGEMOOR230 KV EDG-HAR	LINE
DUQU	COLLIER 345 KV COL-TID	LINE
FE	SAMMISFE345 KV SAM-WYL	LINE
ILL_EQ	BROKAW 345 KV BRO-LAN	LINE
JC-N	READINGT230 KV REA-ROS	LINE
JC-S	ATLANTIC230 KV ATL-LAR	LINE
ME	MIDDLEJCT230 KV MID-TMI2	LINE
PE	PEACHBOT500 KV PEA-TMI	LINE
PEP	BURCHESH500 KV BUR-POS	LINE
PL	MARTINSC230 KV MAR-SIE2	LINE
PL	ALBURTIS500 KV ALB-BRA	LINE
PL	HOSENSAC500 KV HOS-TMI	LINE
PN	KEYSTONE230 KV KEY-SHE	LINE
PS-N	ATHENIA 230 KV ATH-CLIK	LINE
PS-N	ATHENIA 230 KV ATH-SAD	LINE
PS-N	CEDARGRO230 KV CED-CLIK	LINE
PS-N	HUDSON 230 KV HUD-SWA	LINE
PS-S	HOPECREE500 KV HOP-RED	LINE
PS-S	NEWFREED500 KV NEW-SAL	LINE