

Annual ARR Allocation and FTR Auction Transmission Outage Modeling

PJM determines the transmission outages to model in the simultaneous feasibility test utilized in the Annual ARR Allocation and 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. This list consists of all transmission outages of duration of two weeks or longer. Transmission outages will only be considered in final model if scheduled for at least two months 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 Annual ARR allocation and FTR auction which do not occur simultaneously. Outages often occur during different times of the year 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. In many instances it is impractical and unrealistic to model multiple outages in a similar region that occur during different time periods because the Annual ARR/FTR model is a single year period and if these multiple outages were modeled the optimization program would fail because of a power imbalance or infeasibility.
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. This determination is made by comparing transmission outages to historical data, focusing on higher voltage transmission outages, considering outage duration, and performing power flow congestion analysis.
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 along with the actual FTR model usually at least one week 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 and to ensure that there are sufficient revenues from the annual Financial Transmission Right Auction to satisfy all Auction Revenue Rights obligations.

The SFT analysis has resulted in the below transmission outages to be modeled in the 2016/2017 Annual ARR Allocation and FTR Auction.

2016/2017 Annual ARR/FTR Outages					
Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
AE	BECKETT 69 KV BEC-PAU	LINE	All	10/3/16	12/11/16
AE	CARDIFF 230 KV CAR-CED	LINE	All	10/3/16	12/6/16
AE	CHESTNAE69 KV CHE-MOSS	LINE	All	1/9/17	6/7/17
AE	CHESTNAE69 KV CHE-MOT6	LINE	All	1/9/17	6/7/17
AE	CHURCHTO230 KV CHU-ORCT	LINE	All	12/7/16	1/9/17
AE	CLAYTNAE69 KV CLA-WOO	LINE	All	2/1/2017 3/1/2017	2/28/2017 5/7/2017
AE	CUMB AE 230 KV CUM-ORCT	LINE	All	12/7/16	1/9/17
AE	DEEPWATE69 KV DEE-SAL	LINE	All	9/6/16	1/8/17
AE	DOROTHY 138 KV DOR-LEW	LINE	All	9/6/16	2/28/17
AE	DOROTHY 138 KV DOR-MON	LINE	All	9/6/2016 3/15/2017	2/28/2017 4/23/2017
AE	HIGBEE 69 KV HIG-LEW1	LINE	All	9/6/2016 4/24/2017	1/22/2017 5/31/2017
AE	HIGBEE 69 KV HIG-LEWI	LINE	All	11/25/2016 1/23/2017	1/6/2017 5/31/2017
AE	LAKEAVEN69 KV LAK-MIDT	LINE	All	12/7/16	5/7/17
AE	LEWIS 138 KV LEW-MIN2	LINE	All	9/6/16	2/28/17
AE	LINCOLN1138 KV LIN-UNI	LINE	All	10/3/16	2/7/17
AE	LINCOLN369 KV LIN-SMIL	LINE	All	10/3/16	2/7/17
AE	MICKLETO69 KV MIC-VAL	LINE	All	3/13/17	5/28/17
AE	MIDD AE 138 KV MID #3	XFMR	All	11/14/16	5/17/17
AE	MIDD AE 69 KV MID-RIO7	LINE	All	11/14/2016 1/3/2017	12/6/2016 2/6/2017
AE	ORCHARD 230 KV ORC-ORCT	LINE	All	12/7/16	1/9/17
AE	ORCHARD 500 KV T1	XFMR	All	12/7/16	1/9/17

Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
AE	PINEHILL69 KV PIN-TER	LINE	All	1/2/17	5/7/17
AE	SICKLER 230 KV SICK #1	XFMR	All	10/11/16	4/7/17
AE	SILVERLA230 KV SILV #2	XFMR	All	9/19/16	1/7/17
AEP	ALBIONIM138 KV ALB-EGE1	LINE	All	9/6/16	10/14/16
AEP	AMOS 138 KV AMO-POC1	LINE	All	4/11/16	7/1/16
AEP	ASTOR 138 KV AST-EBR1	LINE	All	9/5/16	11/25/16
AEP	BELPRE 138 KV BEL-DEG	LINE	All	10/3/16	12/16/16
AEP	BETHLEHE138 KV BET-COU	LINE	All	6/1/16	8/19/16
AEP	BIXLERTP138 KV BIX-KEN1	LINE	All	10/17/16	12/22/16
AEP	BOLINS 138 KV BOL-WAT1	LINE	All	12/12/2016 1/23/2017	1/20/2017 3/10/2017
AEP	CABINCRE138 KV CAB-HER	LINE	All	8/22/16	10/14/16
AEP	CABINCRE138 KV CAB-KAN1	LINE	All	9/5/16	10/14/16
AEP	CAPITOLH138 KV CAP-RUT1	LINE	All	1/5/16	12/23/16
AEP	CHEMICAL138 KV CHE-ORT1	LINE	All	11/30/15	9/30/16
AEP	CHESTTAP138 KV CHE-RUT1	LINE	All	4/4/2016 7/25/2016 9/5/2016	7/22/2016 8/19/2016 12/23/2016
AEP	CLINCHRI138 KV CLI-FRE1	LINE	All	9/7/16	10/13/16
AEP	CLOVERD2500 KV CLO-LEX	LINE	All	1/4/2016 9/17/2016	6/30/2016 10/21/2016
AEP	CORNER 138 KV COR-DEG	LINE	All	10/3/16	12/16/16
AEP	COUNTYLI138 KV COU-SAN	LINE	All	6/1/16	8/19/16
AEP	DALEWOOD138 KV DAL-LAK	LINE	All	12/7/15	9/30/16
AEP	DEQUINE 345 KV DEQ-WES2	LINE	All	9/5/16	12/2/16
AEP	DUBLIN 138 KV DUB-DAV1	LINE	All	9/12/16	11/11/16
AEP	DUMONT2 345 KV DUM-OLI1	LINE	All	4/10/17	5/26/17
AEP	ELIMA 138 KV ELI-THA1	LINE	All	10/29/16	12/2/16
AEP	ELIMA 345 KV ELI-FOS1	LINE	All	9/30/16	12/2/16
AEP	FLATBUSH138 KV FLA-MOO1	LINE	All	9/5/16	10/31/16
AEP	HANTHORN138 KV HAN-STE	LINE	All	10/29/16	12/2/16
AEP	HANTHORN138 KV HAN-THA	LINE	All	10/29/16	12/2/16
AEP	HARTFORD138 KV HAR-VAL1	LINE	All	3/6/17	4/28/17
AEP	ITALIANV138 KV ITA-STC	LINE	All	9/6/16	12/2/16
AEP	JUGSTRET138 KV JUG-KIR2	LINE	All	6/6/16	9/2/16
AEP	KAMMER2 138 KV KAM-ORM2	LINE	All	12/4/14	12/31/16
AEP	KAMMER2 138 KV KAM-ORM3	LINE	All	12/4/14	12/31/16
AEP	KAMMER2 138 KV KAM-ORM4	LINE	All	12/4/14	12/31/16
AEP	KENDALLV138 KV KEN-SKI1	LINE	All	10/17/16	12/22/16

Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
AEP	KIMBERLY138 KV KIM-POS	LINE	All	9/12/2016 2/27/2017	12/2/2016 5/5/2017
AEP	LANHAM1 138 KV LAN-POC	LINE	All	4/11/16	7/1/16
AEP	MADDOXCR345 KV ELI-MAD	LINE	All	11/14/16	12/9/16
AEP	MALISZEW138 KV MAL-POL1	LINE	All	9/12/16	11/4/16
AEP	MARYSVI2345 KV MAR-TAN1	LINE	All	10/17/16	11/18/16
AEP	MEADOWLK345 KV MEA-OLI	LINE	All	1/16/17	5/19/17
AEP	MEADOWLK345 KV MEA-REY	LINE	All	1/16/17	5/19/17
AEP	MIFFLIN 138 KV MIF-STC1	LINE	All	9/6/16	12/2/16
AEP	OPOSSUMC138 KV OPO-SLY1	LINE	All	4/17/17	6/2/17
AEP	ORTIN 138 KV ORT-POC1	LINE	All	4/11/16	7/1/16
AEP	REYNOLD2345 KV REY-OLI1	LINE	All	3/20/17	5/19/17
AEP	RUTH 138 KV RUT-TUR1	LINE	All	9/5/16	12/23/16
AEP	SOUTHRID138 KV CAB-SOU	LINE	All	4/4/16	9/16/16
AEP	WATERLOO138 KV POS-WAT	LINE	All	12/12/2016 1/23/2017	1/20/2017 3/10/2017
AEP-AP	CABINCRE138 KV . 8	XFMR	All	9/5/16	10/14/16
AEP-AP	CHESTER2138 KV 1-P	XFMR	All	9/5/16	12/23/16
AEP-AP	CLOVERD2500 KV T15	XFMR	All	9/17/2016 1/4/2016	10/21/2016 6/30/2016
AEP-AP	CLOVERD2500 KV T16	XFMR	All	1/4/2016 9/17/2016	6/30/2016 10/21/2016
AEP-AP	RICHLAND138 KV 2	XFMR	All	5/2/16	7/26/16
AEP-AP	SLYNCHBU138 KV 1-P	XFMR	All	4/17/17	6/2/17
AEP-IM	HODGIN 138 KV 1	XFMR	All	9/20/16	11/18/16
AEP-IM	MOOREPAR138 KV 1	XFMR	All	9/5/16	10/31/16
AEP-IM	ROBISONP345 KV . 5	XFMR	All	10/31/16	12/22/16
AEP-IM	TWINBRAN345 KV T-7	XFMR	All	3/20/17	4/28/17
AEP-KY	BAKER 765 KV .100	XFMR	All	4/3/17	5/26/17
AEP-OH	FREEBYRD138 KV FRE-SCA	LINE	All	11/7/16	5/26/17
AEP-OH	HAZLTNAP138 KV HAZ-KIR	LINE	All	6/6/16	9/2/16
AEP-OH	MARQUIS2765 KV XF1	XFMR	All	9/12/16	11/4/16
APSS	DOUBLETO138 KV DOU-RIV	LINE	All	10/3/2016 3/1/2017	12/2/2016 5/31/2017
APSS	DURBIN 138 KV DUR-DUR	LINE	All	8/1/2016 9/1/2016	8/29/2016 9/30/2016
APSS	DURBINTP138 KV DUR-PIC	LINE	All	8/1/2016 9/1/2016	8/29/2016 9/30/2016
APSS	MILLVILL138 KV MIL-SLE	LINE	All	9/1/16	12/31/16

Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
BC	CONASTON230 KV CNS-OTT	LINE	All	10/17/16	10/17/17
BC	LIPINSCO115 KV LIP-WAG5	LINE	All	10/13/16	10/13/20
CIN	GREENTO2765 KV 2-P	XFMR	All	9/12/16	12/23/16
COMED	107 DIXO138 KV 10714	LINE	All	9/19/16	12/30/16
COMED	11120 345 KV 11120 3	LINE	All	9/8/15	10/1/16
COMED	112 WILT345 KV TR94CT-S	XFMR	All	3/6/17	5/26/17
COMED	114 NORT138 KV 11411 1	LINE	All	9/16/16	10/28/16
COMED	12 DRESO138 KV TR83CT-S	XFMR	All	10/1/16	1/20/17
COMED	12 DRESO345 KV 1223	LINE	All	10/1/16	11/13/16
COMED	122 BELV138 KV 17105 3	LINE	All	9/19/16	11/24/16
COMED	133 ROCK138 KV 7411 2	LINE	All	2/1/17	4/21/17
COMED	144 WAYN138 KV TR81CT-S	XFMR	All	9/12/16	12/9/16
COMED	14419 345 KV 14419 3	LINE	All	9/8/15	10/1/16
COMED	156 CHER138 KV TR83CT-S	XFMR	All	10/3/16	11/13/16
COMED	156 CHER345 KV TR83CT-P	XFMR	All	10/3/16	11/13/16
COMED	505 OAK 138 KV 19209	LINE	All	9/19/16	11/18/16
COMED	7 STATE 138 KV 0705	LINE	All	11/28/16	2/10/17
COMED	77 MAZON138 KV 0108 2	LINE	All	9/12/16	10/21/16
COMED	77 MAZON138 KV 1205 4	LINE	All	9/12/16	10/21/16
COMED	88 SKOKI138 KV 8806 1	LINE	All	9/17/16	10/28/16
COMED	88 SKOKI138 KV TR84CT-S	XFMR	All	9/19/16	12/13/16
COMED	88 SKOKI345 KV 8823	LINE	All	10/15/16	12/13/16
COMED	8810 138 KV 8810 1	LINE	All	9/17/16	10/28/16
COMED	981 CRES138 KV 7413	LINE	All	10/31/16	12/23/16
CONS	ARGENTA2345 KV ANG-DCC	LINE	All	10/31/16	12/22/16
DAYTON	BATH 138 KV BAT-09T1	LINE	All	9/19/16	12/1/16
DEOK	CHARLES 138 KV 08C-WEN3	LINE	All	11/14/16	1/20/17
DEOK	KLEEMAN 138 KV 08K-08M1	LINE	All	9/9/16	10/15/16
DEOK	MIAMIFOR138 KV MIA-TP72	LINE	All	9/9/16	10/15/16
DEOK	NICKEL 138 KV NIC-TOD	LINE	All	9/12/16	12/30/16
DEOK	TODDHUNT345 KV TOD-WOO2	LINE	All	3/6/17	4/1/17
DOM-C	ACCA 115 KV 159A2	LINE	All	9/26/16	11/4/16
DOM-C	ACCA 115 KV 88A2	LINE	All	9/26/16	11/4/16
DOM-C	CARSON4 500 KV TX1H	XFMR	All	6/8/15	12/31/16
DOM-C	HALIFAX 230 KV 296A	LINE	All	9/6/16	11/13/16
DOM-C	HARMONYV230 KV TX2	XFMR	All	9/6/16	11/23/16
DOM-C	KERRDAM 115 KV 137A1	LINE	All	8/28/16	3/4/17
DOM-C	NANNA4 500 KV TX5	XFMR	All	9/19/16	10/28/16

Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
DOM-C	NDOSWLDAP115 KV 47D	LINE	All	10/17/16	4/25/17
DOM-C	WHITESTN115 KV 65A	LINE	All	5/8/16	7/27/18
DOM-E	FENTRES4500 KV TX3	XFMR	All	9/1/16	1/31/17
DOM-E	REEVESAV115 KV 129A	LINE	All	1/9/17	7/7/17
DOM-E	REEVESAV115 KV 51B	LINE	All	1/9/17	7/7/17
DOM-E	ROCKLNDG230 KV 292C1	LINE	All	5/29/16	8/20/16
DOM-E	WALLER 115 KV 58C	LINE	All	1/29/17	5/11/17
DOM-E	WALLER 115 KV 58D	LINE	All	1/29/17	5/11/17
DOM-E	WARWICK 230 KV 292A	LINE	All	9/11/16	1/28/17
DOM-N	BELVOIR 230 KV 220A	LINE	All	9/12/2016 11/29/2016	10/21/2016 1/13/2017
DOM-N	BRAMBLET230 KV 2094A	LINE	All	5/23/16	12/31/16
DOM-N	FRANCONA230 KV 243A	LINE	All	10/12/16	12/17/16
DOM-N	FRANCONA230 KV TX2	XFMR	All	10/12/16	12/17/16
DOM-N	GOOSECRE500 KV 595	LINE	All	4/3/17	5/12/17
DOM-N	MARSHRUN230 KV 280A	LINE	All	4/5/17	5/15/17
DOM-N	MORRISVL500 KV TX1	XFMR	All	2/27/17	3/31/17
DOM-N	PENTAGON69 KV 174A	LINE	All	5/31/16	10/1/16
DOM-N	PENTAGON69 KV 179A	LINE	All	8/15/15	12/31/16
DOM-N	PLEASNTV500 KV TX3	XFMR	All	4/3/17	5/12/17
DOM-N	POSSUMP4115 KV 145A	LINE	All	7/17/16	7/22/17
DOM-N	REMINGTN230 KV 2077A	LINE	All	4/5/17	5/15/17
DOM-N	REMINGTN230 KV TX3	XFMR	All	4/5/17	5/15/17
DOM-N	STJOHNS4115 KV 47E	LINE	All	3/25/17	7/20/17
DOM-N	VANDORN 230 KV 243B	LINE	All	10/12/16	12/17/16
DOM-S	LKGASTON115 KV 90A	LINE	All	1/2/17	5/31/17
DOM-S	WHARTON4115 KV 82A	LINE	All	1/2/17	10/30/17
DOM-W	BREMO4 138 KV TX8A	XFMR	All	3/8/17	5/24/17
DOM-W	CUNNIHAM500 KV 553A	LINE	All	10/23/16	6/2/17
DPL	CEDARCRE230 KV CED-MIL	LINE	All	3/13/17	5/25/17
DPL	CHURCH 138 KV CHU-OIL	LINE	All	9/6/16	4/28/17
DPL	CHURCH 69 KV CHU-MAS	LINE	All	3/13/17	5/25/17
DPL	DUPSEAFD69 KV DUP-LAU	LINE	All	9/1/16	12/31/16
DPL	FRUITLAN69 KV FRT-PEM	LINE	All	1/2/17	5/31/17
DPL	HILLSBRO138 KV HIL-WYE	LINE	All	1/2/17	5/26/17
DPL	KENNEDYV69 KV KND-MAS	LINE	All	10/3/2016 3/13/2017	11/30/2016 5/25/2017
DPL	KENNEY 69 KV KEN-MTO	LINE	All	12/12/16	3/31/17

Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
DPL	KRATZ 69 KV KRA-SHAR	LINE	All	1/2/17	4/28/17
DPL	MARIDEL 69 KV MRD-OCC	LINE	All	3/6/17	4/14/17
DPL	MASSEY 69 KV MAS-MAS	LINE	All	10/3/2016 3/13/2017	11/30/2016 5/25/2017
DPL	MIDWAY 69 KV MID-REH	LINE	All	2/1/17	3/31/17
DPL	M THERMON69 KV MTH-NSA	LINE	All	4/3/17	5/26/17
DPL	NELSON 69 KV NEL-SHO	LINE	All	10/3/16	11/25/16
DPL	NSEAFORD138 KV NSE-SHA	LINE	All	9/1/2016 5/1/2017	9/30/2016 5/31/2017
DPL	OCEANPIN69 KV OCN-WOR	LINE	All	1/2/17	2/19/17
DPL	OILCITY 138 KV OIL-STE	LINE	All	9/6/16	5/21/17
DPL	SHARP 69 KV SHA-VIE	LINE	All	1/2/17	5/26/17
DPL	SIGNPOST69 KV SGP-WAT	LINE	All	4/3/17	5/26/17
DUQU	AES DUQ 138 KV AES-RAC	LINE	All	8/1/2016 5/2/2017	10/1/2016 6/3/2017
DUQU	BEAV DUQ138 KV BEA-CRE8	LINE	All	9/19/16	11/18/16
DUQU	BRUNOTIS138 KV BRU-MON	LINE	All	9/13/16	3/24/17
DUQU	BRUNOTIS345 KV BR1-COL	LINE	All	9/19/16	11/4/16
DUQU	BRUNOTIS345 KV BRU-COL	LINE	All	9/19/16	11/4/16
DUQU	COLLIER 345 KV COL-CRE	LINE	All	9/19/16	11/4/16
DUQU	CRES DUQ138 KV CRE-HOP	LINE	All	9/19/2016 10/31/2016	10/28/2016 12/16/2016
DUQU	CRES DUQ138 KV CRE-MON	LINE	All	9/19/2016 1/2/2017	11/18/2016 5/5/2017
DUQU	CRES DUQ138 KV CRE-NOR	LINE	All	9/19/2016 10/31/2016	10/28/2016 12/16/2016
DUQU	CRES DUQ138 KV CRE-SEW	LINE	All	9/19/2016 2/27/2017	10/14/2016 4/28/2017
DUQU	CRES DUQ138 KV CRE-VAL	LINE	All	9/19/2016 10/31/2016	10/28/2016 12/16/2016
DUQU	CRES DUQ345 KV T1	XFMR	All	9/19/16	10/28/16
DUQU	CRES DUQ345 KV T2	XFMR	All	12/4/15	12/31/17
DUQU	CRES DUQ345 KV T3	XFMR	All	9/19/2016 10/31/2016	10/28/2016 12/16/2016
DUQU	POTTERSS138 KV POT-RAC1	LINE	All	8/1/16	10/7/16
DUQU	POTTERSS138 KV POT-RAC2	LINE	All	8/1/16	10/7/16
DUQU	POTTERSS138 KV POT-VAL1	LINE	All	8/1/16	10/7/16
DUQU	POTTERSS138 KV POT-VAL2	LINE	All	8/1/16	10/7/16
EKPC	BOONST 138 KV BOO-DALE	LINE	All	8/29/16	11/18/16

Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
EKPC	DALESTN 138 KV DAL-JKSM	LINE	All	8/29/16	11/18/16
EKPC	DALESTN 69 KV DAL-HNT1	LINE	All	8/29/16	11/18/16
EKPC	DALESTN 69 KV DAL-HNT2	LINE	All	8/29/16	11/18/16
EKPC	NWCST_EK69 KV NWC-OWEN	LINE	All	3/1/16	12/30/16
FE	O2BRIM 138 KV O2B-BTAP	LINE	All	9/1/16	12/1/16
FE	O2BRIM 138 KV 1	XFMR	All	9/1/16	12/1/16
FE	O2TOUSNT138 KV 1	XFMR	All	9/15/16	12/15/16
FE	BLACKRIV138 KV BLA-JOH2	LINE	All	9/5/16	10/21/16
FE	BOWL_GR569 KV BOW5-BRM	LINE	All	9/1/16	12/1/16
FE	EVERGFE 138 KV WCI-EVE1	LINE	All	10/24/12	12/31/20
FE	EVERGFE 138 KV WCI-EVE2	LINE	All	10/24/12	12/31/20
FE	GREENFOE138 KV TR4	XFMR	All	11/13/15	11/4/16
FE	LEMOYNE2138 KV LEM-BTAP	LINE	All	9/1/16	12/1/16
FE	MIDWAYTE138 KV MID-BTAP	LINE	All	9/1/16	12/1/16
FE	ROBERTOE138 KV TR3	XFMR	All	7/23/15	9/20/16
FE	SAMMISFE138 KV SAM-PID1	LINE	All	9/5/16	10/28/16
FE	STAR_FE 138 KV STA-CLO1	LINE	All	9/1/16	10/14/16
FE	WCIHOTST138 KV WCI-WCI1	LINE	All	10/24/12	12/31/20
FECL	ASHTABUL345 KV TR-8	XFMR	All	9/16/16	11/23/16
FECL	GLENWILL345 KV GLE-INL	LINE	All	9/1/16	12/16/16
FECL	HARDING2345 KV HAR-INL1	LINE	All	9/1/16	12/16/16
FECL	INLAND 345 KV 3	XFMR	All	9/1/16	12/16/16
FECL	INLAND 345 KV 4	XFMR	All	9/1/16	12/16/16
FEPA	MAPLEOE 138 KV TR2	XFMR	All	4/4/16	6/24/16
FEPA	SHARON 138 KV TR2	XFMR	All	8/29/16	12/1/16
JC-S	ATLANTIC230 KV 1TRAN	XFMR	All	9/19/16	5/1/17
JC-S	ATLANTIC230 KV ATL-LAR	LINE	All	3/27/17	5/29/17
JC-S	ATLANTIC230 KV ATL-OCEX	LINE	All	4/3/17	5/15/17
JC-S	ATLANTIC230 KV ATL-OCEY	LINE	All	9/19/16	5/1/17
JC-S	EWINDSOR500 KV EWIN-NEW	LINE	All	10/1/16	11/29/16
JC-S	OCEANVIE230 KV BK 2TR	XFMR	All	4/3/17	5/15/17
ME	HUNTERST115 KV HUN-OXF	LINE	All	3/13/17	5/26/17
ME	MIDDLJCT230 KV 1 BANK-P	XFMR	All	4/17/17	5/26/17
ME	MIDDLJCT230 KV 2 BANK-P	XFMR	All	4/17/17	5/26/17
ME	MIDDLJCT230 KV 3 BANK	XFMR	All	4/17/17	5/26/17
ME	MIDDLJCT230 KV MID-TMI1	LINE	All	4/17/17	5/26/17
PEP	10THST 138 KV 10T-OST	LINE	All	9/17/16	12/3/16
PEP	ALABAMA 230 KV ALA-PAL9	LINE	All	9/1/16	12/16/16

Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
PEP	BLUEPLAI230 KV BLU-PAL8	LINE	All	9/1/16	12/16/16
PEP	BLUEPLAI230 KV BLU-POT1	LINE	All	9/1/16	12/16/16
PEP	BOWIE 115 KV BOW-LAN5	LINE	All	9/1/16	12/9/16
PEP	BURCHESH230 KV BUR-PAL3	LINE	All	9/1/16	12/16/16
PEP	BURCHESH230 KV BUR-TAL1	LINE	All	9/1/16	12/16/16
PEP	BURCHESH230 KV BUR-TAL2	LINE	All	9/17/16	5/31/17
PEP	BURCHESH500 KV BUR-CHA	LINE	All	9/17/2016 3/4/2017	12/10/2016 6/1/2017
PEP	BURTONSV230 KV BUR-MET6	LINE	All	10/13/16	12/15/16
PEP	METZTAP 230 KV 163-3T	XFMR	All	10/13/16	12/15/16
PEP	METZTAP 230 KV MET-TAK0	LINE	All	10/13/16	12/15/16
PEP	PALMERS 230 KV 084-1T	XFMR	All	9/1/16	12/16/16
PEP	QUINCEOR230 KV 118-1T	XFMR	All	3/1/17	5/18/17
PEP	TAKOMA 230 KV 027-5T	XFMR	All	10/13/16	12/15/16
PEP	TAKOMA 230 KV 027-7T	XFMR	All	10/13/16	12/15/16
PL	ALLENOW138 KV ALL-CEA1	LINE	All	10/4/16	11/22/16
PL	BEVERLY 138 KV BEV-DUR	LINE	All	8/1/2016 9/1/2016	8/29/2016 9/30/2016
PL	BRUNNERI230 KV BRU-MID5	LINE	All	4/17/17	5/26/17
PL	COLU PL 230 KV 1	XFMR	All	10/17/16	11/23/16
PL	COPPERST230 KV COP-MID	LINE	All	4/17/17	5/26/17
PL	CUMB PL 230 KV CUM-WSH	LINE	All	3/1/17	8/31/17
PL	HOSENSAC230 KV HOS-WES	LINE	All	10/5/15	7/29/16
PL	HOSENSAC500 KV HOS-TMI	LINE	All	10/3/2016 4/17/2017	11/11/2016 5/19/2017
PL	HUMMELST230 KV HUM-MID8	LINE	All	4/17/17	5/26/17
PL	JENKINS 230 KV JEN-SUS	LINE	All	3/13/17	12/29/17
PL	LOCKHAVE69 KV LOC-LYC1	LINE	All	3/16/16	7/29/16
PL	MONTOUR 230 KV MON-T10	LINE	All	8/1/16	10/22/16
PL	QUARRY 230 KV 4	XFMR	All	1/4/17	2/22/17
PL	SAKRON 230 KV SAK-SRE	LINE	All	10/10/2016 2/27/2017	11/11/2016 3/29/2017
PL	WESCOSVI230 KV 2	XFMR	All	10/5/15	7/29/16
PN	ETOWANDA115 KV ETO-GAS	LINE	All	9/20/16	11/4/16
PN	FARMERSV115 KV FAR-LEW	LINE	All	3/1/17	10/1/17
PN	HOMERCIT345 KV HOM-WAT	LINE	All	1/1/16	1/1/20
PS-N	49STREET230 KV 49T-HOBR	LINE	All	9/15/16	1/31/17
PS-N	BAYONNE 138 KV BAY-MAR	LINE	All	9/17/16	12/31/16
PS-N	BAYWAY 138 KV BAY-LINW	LINE	All	11/1/16	3/30/17

Zone	Facility Name	Type	Modeled Period	Scheduled Start Day	Scheduled End Day
PS-N	BERGEN 138 KV BER-NBE	LINE	All	10/7/15	12/31/20
PS-N	BRUNSWIC138 KV BRU-EDI	LINE	All	3/13/17	5/19/17
PS-N	DEANS 230 KV DEA-PIES	LINE	All	9/12/2016 11/5/2016 2/13/2017	11/3/2016 2/3/2017 3/17/2017
PS-N	EDISON 138 KV EDI-MEAQ	LINE	All	3/23/16	12/31/20
PS-N	FAIRLAWN138 KV FAI-KUL	LINE	All	9/6/16	12/31/16
PS-N	HOBOKEN 230 KV HOB-NEWR	LINE	All	9/15/16	1/31/17
PS-N	HOMESTEAD138 KV HOM-MARF	LINE	All	9/26/15	12/31/20
PS-N	MEADOWRD138 KV MEA-METQ	LINE	All	3/23/16	12/31/20
PS-N	METUCHEN230 KV MET-PIEH	LINE	All	1/31/17	3/30/17
PS-N	NEWDOVER230 KV NEW-PIEH	LINE	All	1/31/17	3/30/17
PS-S	MARLTON 230 KV MAR-SIL	LINE	All	9/19/16	1/7/17
PS-S	NEWFREED230 KV NEW-SIL	LINE	All	9/19/16	1/7/17
PS-S	NEWFREED500 KV 500-2	XFMR	All	9/4/2016 12/4/2016	11/30/2016 12/31/2016