

Transmission Expansion Advisory Committee Stage 1A 10-Year ARR Analysis

August 13, 2015

- On an annual basis PJM conducts a simultaneous feasibility analysis test for stage 1A ARRs which shall assess the simultaneous feasibility for a 10-year period.
- 10-year analysis on 2015/16 Stage 1A ARRs resulted in violations on both internal and M2M facilities.
- Already approved planned upgrades were identified for all violations either within the PJM or MISO planning processes.
 - Violations on several ATSI facilities were detected in years 9 and 10 and will be monitored in future analysis



2015/2016 Final Stage 1A 10-Year ARR Results (Page 1 of 2)

Facility Name	Facility Type	Upgrade expected to fix infeasibility	Expected in-service date
0621 Byron-Cherry Valley 345 kV I/o 0622 Byron-Cherry Valley 345 kV	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
0622 Byron-Cherry Valley 345 kV I/o 0621 Byron-Cherry Valley 345 kV	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
12205-151 Woodstock 138 kV I/o Cherry Valley-Silver Lake 345 kV	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
15616 Cherry Valley-Silver Lake I/o 15502 Nelson-Electric Jct.	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
15623-Belvidere 138 I/o Cherry Valley-Silver Lake 345	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
6101-Hennepin 138 I/o Oglesby Tap 138 sub	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
6101-Hennepin 138 I/o Princetp 138 Sub	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
6101tap_Hennepin138_FLO_Kewanee_CrescentRidgeWF138	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Beaver Channel-Albany 161 I/o Quad Cities-H471 ESS 345	Flowgate	MISO MVP 3127: Dubuque to Cardinal	2024
BEAVER CHANNEL-ALBANY 161KV flo NELSON-STERLING STEEL 345KV	Flowgate	MISO MVP 3127: Dubuque to Cardinal	2024
Beaver_Channel_Albany_161_flo_Cordova_Nelson_345	Flowgate	MISO MVP 3127: Dubuque to Cardinal	2024
Belvidere-12205 138 I/o Cherry Valley-Silver Lake 345	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Breed-Wheatland 345 kV line I/o Rockport-Jefferson 765 kV line	Flowgate	MISO MVP 2202: Brookston to Greentown 765	2018
Byron-Cherry Valley 0621 345 kV I/o Byron-Wempletown 345 kV	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Byron-Cherry Valley 0622 345 I/o Byron-Wempletown 0624 345	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Cherry Valley-Silver Lake (15616) 345 kV line	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Dixon-McGirr Rd 138 kV I/o Nelson-Electric Jct 345 kV	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
IP_1352_Pwr_Jct_flo_Nelson_Electric_Jct	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Kyger Creek-Sporn 345 kV	Flowgate	PJM RTEP B2470: Rebuild both Kyger Creek - Sporn 345 lines	2016
MarengoTap-PlsntValley(12204-2)138kV I/o ChryVly-SilverLake(15616)345kV	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Nelson 345/138 TR82 I/o Nelson-Electric Jct 345	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Nelson-Electric Jct (15502) I/o Cherry Val-Silver Lake (15616)	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Nelson-Electric Junction (15502) I/o Byron-Cherry Valley (0621)	Flowgate	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
Oak_Grove_Galesburg_flo_Nelson_ElectricJct	Flowgate	MISO MVP 3022: Fargo-Oak Grove 345 kV Line	2016
Oakgrove_Galesburg_161_FLO_Cordova_Nelson_345	Flowgate	MISO MVP 3022: Fargo-Oak Grove 345 kV Line	2016
Pana - Moweaq Tap 138 (flo) Kincaid - Latham - Blue Mound 345	Flowgate	MISO MVP 2237, 3169: Pawnee-Pana-Mt. Zion-Kansas-Sugar Creek 345 kV	2016
Pana345_138kVXFMR_flo_Kincaid_Lanesvil_Kincaid_Pawnee345	Flowgate	MISO MVP 2237, 3169: Pawnee-Pana-Mt. Zion-Kansas-Sugar Creek 345 kV	2016
Pana345_138kVXFMR_flo_Kincaid_Latham_BlueMound345kV	Flowgate	MISO MVP 2237, 3169: Pawnee-Pana-Mt. Zion-Kansas-Sugar Creek 345 kV	2016
Pana345by138_flo_KncaidUnit2_Kncaid_Lnesvle345	Flowgate	MISO MVP 2237, 3169: Pawnee-Pana-Mt. Zion-Kansas-Sugar Creek 345 kV	2016
Pawnee - Auburn 138 (flo) Kincaid - Latham - Blue Mound 345	Flowgate	MISO MVP 2237, 3169: Pawnee-Pana-Mt. Zion-Kansas-Sugar Creek 345 kV	2016
Pawnee 345/138 xfmr (flo) Coffeen - Pana - Kincaid 345	Flowgate	MISO MVP 2237, 3169: Pawnee-Pana-Mt. Zion-Kansas-Sugar Creek 345 kV	2016
Rising 345/138 TR1 (flo) Dresden - Pontiac 345kV	Flowgate	MISO MVP 2237, 3169: Pawnee-Pana-Mt. Zion-Kansas-Sugar Creek 345 kV	2016

Facility Name	Facility Type	Upgrade expected to fix infeasibility	Expected in-service date
138 SILV345 KV 15616 I/o Nelson-Electric Junction 345kV (15502 line)	Internal	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
155 NELS345 KV TR84CT-P I/o Nelson-Electric Jct 345+Cordova-Nelson 345	Internal	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
156 CHER138 KV TR83CT-S I/o L345.CherryValley-SilverLake+CherryValley.TR81	Internal	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
156 CHER345 KV TR83CT-P I/o L345.CherryValley-SilverLake+CherryValley.TR81	Internal	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
16914 138 KV 16914 1 I/o L345.Nelson-Electric Junction.15502	Internal	PJM RTEP B2141: New Byron-Wayne 345 kV circuit	2017
ATHENIA 230 KV ATH-CLIB I/o L230.CedarGrove-Clifton-Athenia.K-2263 + Ath.T2	Internal	PJM RTEP: B1304.1 Convert the existing 'D1304' and 'G1307' 138 kV circuits between Roseland - Kearny- Hudson to 230 kV operation. B1304.3: Build second 230 kV underground cable from Bergen to Athenia	2015
ATHENIA 230 KV ATH-CLIK I/o L230.CedarGrove-Clifton-Athenia.B-2228	Internal	PJM RTEP: B1304.1 Convert the existing 'D1304' and 'G1307' 138 kV circuits between Roseland - Kearny- Hudson to 230 kV operation. B1304.3: Build second 230 kV underground cable from Bergen to Athenia	2015
BERGENFI230 KV BER-LEOO	Internal	PJM RTEP: B1304.1 Convert the existing 'D1304' and 'G1307' 138 kV circuits between Roseland - Kearny- Hudson to 230 kV operation. B1304.3: Build second 230 kV underground cable from Bergen to Athenia	2015
BERGENFI230 KV BER-LEOO I/o L230.Athenia-Belleville.Z-2226	Internal	PJM RTEP: B1304.1 Convert the existing 'D1304' and 'G1307' 138 kV circuits between Roseland - Kearny- Hudson to 230 kV operation. B1304.3: Build second 230 kV underground cable from Bergen to Athenia	2015
BERGENFI230 KV BER-NEWO	Internal	PJM RTEP: B1304.1 Convert the existing 'D1304' and 'G1307' 138 kV circuits between Roseland - Kearny- Hudson to 230 kV operation. B1304.3: Build second 230 kV underground cable from Bergen to Athenia	2015
BERGENFI230 KV BER-NEWO I/o L230.Athenia-Belleville.Z-2226	Internal	PJM RTEP: B1304.1 Convert the existing 'D1304' and 'G1307' 138 kV circuits between Roseland - Kearny- Hudson to 230 kV operation. B1304.3: Build second 230 kV underground cable from Bergen to Athenia	2015
CEDARGRO230 KV CED-CLIB I/o L230.CedarGrove-Clifton-Athenia.K-2263 + Ath.T2	Internal	PJM RTEP: B1304.1 Convert the existing 'D1304' and 'G1307' 138 kV circuits between Roseland - Kearny- Hudson to 230 kV operation. B1304.3: Build second 230 kV underground cable from Bergen to Athenia	2015
CEDARGRO230 KV CED-CLIK I/o L230.CedarGrove-Clifton-Athenia.B-2228	Internal	PJM RTEP: B1304.1 Convert the existing 'D1304' and 'G1307' 138 kV circuits between Roseland - Kearny- Hudson to 230 kV operation. B1304.3: Build second 230 kV underground cable from Bergen to Athenia	2015
02KYHS 138 KV 02K-OTT I/o L138.Ottawa-West Fremont.1	Internal	Violation in Year 10. Monitor in future analysis.	
02KYHS 138 KV 02K-WFR1 I/o L138.Ottawa-West Fremont.1	Internal	Violation in Year 10. Monitor in future analysis.	
OTTAWATE138 KV OTT-WFR I/o L138.Ottawa-West Fremont.2	Internal	Violation in Year 9. Monitor in future analysis.	