

2026-2027

Stage 1A ARR 10-Year Analysis Update

Market Simulation

Transmission Expansion Advisory Committee

October 6, 2026

Disclaimer: While materials are current at the time of publishing, applicable requirements may change. PJM Governing Documents control.

- Conduct annually to ensure transmission system adequacy for the 10-year Stage 1A ARR feasibility.
- Support Stage 1A ARRs covering 60% of Network Service Peak Load over the next 10 years.
- Use annual ARR/FTR market model.
- For zonal expected load not covered by Stage 1A ARR requests, assume additional ARR MWs from eligible Stage 1 resources with historical LMPs below the zonal LMP.

- 2026/2027 Stage 1A 10-Year ARR analysis identified 40 violations.
- Previously approved RTEP upgrades are anticipated to address all violations (see next slides).

Results of 2026/27 Stage 1A ARR 10-year Analysis

Constraint	Facility Type	First Year of Violation	Upgrade Expected to Fix Infeasibility
ASPENSLR115 KV ASP-SHAD	LN	1	B3751, B3752: Rebuild Roxbury-Shade Gap 115 kV line
ASPENSLR115 KV ASP-SHAD I/o L500.Conastone-PeachBottom.5012	LN	1	B3751, B3752: Rebuild Roxbury-Shade Gap 115 kV line
CONASTON230 KV CNS-NOR2 I/o L230.Conastone-Northwest.2310	LN	1	B3771: Reconductor Northwest-Conastone 230 kV lines
CONASTON230 KV CNS-OTT I/o L500.Conastone-PeachBottom.5012	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
CONASTON500 KV CNS-PEA I/o L500.PeachBottom-TMI.5007	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
CONASTON500 KV CNS-PEA	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
GERMANTO115 KV GER-STR I/o L500.Brighton-Conastone.5011	LN	1	B3871: New 230 kV Hunterstown-Carroll line
GERMANTO115 KV GER-STR	LN	1	B3871: New 230 kV Hunterstown-Carroll line
COOPERPE230 KV COO-GRA I/o L500.Conastone-PeachBottom.5012	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
COOPERPE230 KV COO-GRA	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
COOPERPE230 KV COO-PEA I/o L500.Conastone-PeachBottom.5012	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
COOPERPE230 KV COO-PEA	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)

Results of 2026/27 Stage 1A ARR 10-year Analysis

Constraint	Facility Type	First Year of Violation	Upgrade Expected to Fix Infeasibility
NOTTINGH230 KV 1-3 I/o L500.Conastone-PeachBottom.5012	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
NOTTINGH230 KV 1-3	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
NOTTINGH230 KV 2-3 I/o L500.Conastone-PeachBottom.5012	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
NOTTINGH230 KV 2-3	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
NOTTINGH230 KV NOT-PEA I/o L500.Conastone-PeachBottom.5012	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
NOTTINGH230 KV NOT-PEA	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
GRACETON230 KV GRA-MANO I/o L500.Conastone-PeachBottom.5012	LN	1	2022 RTEP Reliability Window 3 for load growth and generation deactivation (b3780, b3800)
LINCOLN 115 KV LIN-STR I/o L500.Brighton-Conastone.5011	LN	1	B3871: New 230 kV Hunterstown-Carroll line
LINCOLN 115 KV LIN-STR	LN	1	B3871: New 230 kV Hunterstown-Carroll line
TMI 500 KV 1 BANK I/o L500.Conastone-PeachBottom.5012	LN	1	B3769: Install second TMI 500/230 kV transformer
Nelson - Electric Junction (15502) 345 kV I/o Byron - Wayne 345 kV	LN	1	S3342: New Keslinger substation
Nelson - Electric Junction 345 kV	LN	1	S3342: New Keslinger substation

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Constraint	Facility Type	First Year of Violation	Upgrade Expected to Fix Infeasibility
CARL PN 115 KV CAR-GAR I/o 230/115.Lewistown.T3	LN	1	S3743: Carlisle Pike-Gardners 115 kV 976 Line Rebuild
CARL PN 115 KV CAR-GAR	LN	1	S3743: Carlisle Pike-Gardners 115 kV 976 Line Rebuild
COLLEGEC138 KV COL-COL6 I/o L345.TannersCreek-MiamiFort	LN	1	B4003: Rebuild the College Corner -Collinsville 138 kV circuit
COLLEGEC138 KV COL-COL6	LN	1	B4003: Rebuild the College Corner -Collinsville 138 kV circuit
HAYNIE 115 KV HAY-PIN I/o L345.Ashtabula-ErieWest	LN	1	S2764.1: Rebuild the Piney – Haynie 115 kV line using double circuit 115 kV construction
HAYNIE 115 KV HAY-PIN	LN	1	S2764.1: Rebuild the Piney – Haynie 115 kV line using double circuit 115 kV construction
LORETTO 138 KV LOR-VIE I/o 230/138.PineyGrove.AT20	LN	1	b4023.1: Upgrade Vienna equipment
LORETTO 138 KV LOR-VIE	LN	1	b4023.1: Upgrade Vienna equipment
MARDELA 69 KV MAR-VIE I/o L138.Loretto-Vienna.13780	LN	1	B3846: Rebuild Mardela-Vienna 69 kV
MARDELA 69 KV MAR-VIE	LN	1	B3846: Rebuild Mardela-Vienna 69 kV
MIDDLETO138 KV MID-MTP I/o L230.CedarCreek-SilverRun.23030	LN	1	B3224: Replace disconnect switch and reconductor span of Mt. Pleasant-Middletown Tap line
MIDDLETO138 KV MID-MTP	LN	1	B3224: Replace disconnect switch and reconductor span of Mt. Pleasant-Middletown Tap line

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Constraint	Facility Type	First Year of Violation	Upgrade Expected to Fix Infeasibility
SHAWVILL115 KV BNK 1A-S I/o L230.Forest-SquabHollow	LN	1	S3334.1: Replace Shawville 1A transformer
SHAWVILL115 KV BNK 1A-S	LN	1	S3334.1: Replace Shawville 1A transformer
SHAWVILL115 KV BNK 2A-S I/o L230.Forest-SquabHollow	LN	1	B3708: Replace Shawville 2A transformer
SHAWVILL115 KV BNK 2A-S	LN	1	B3708: Replace Shawville 2A transformer

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