

ATTACHMENT A
LIST OF NMPC PHASE 2 PROJECTS

All NYSPC-Approved NMPC Phase 2 Projects

	Project Name	Project Description
1.	Alcoa Thermal Upgrades	Replace all existing station connection conductors with new 2000 AL 91 strand or larger conductors. The existing 115kV bus will also be replaced with new 3000AL 127 strand or larger conductors.
2.	Black River - Lighthouse Hill Rebuild	Rebuild existing 35.6 mile double circuit Black River Lighthouse Hill 115kV corridor as two single circuit lines.
3.	Black River - North Carthage - Taylorville Rebuild	Rebuild the 26.1mi double circuit T3060 Black River Taylorville #2, T3050 Black River North Carthage #1, and T6270 North Carthage Taylorville #8 Circuits as two single circuits in the same corridor.
4.	Black River Substation Upgrades	Replace the five existing 115kV circuit breakers R10, R20, R30, R50, and R80 with new circuit breakers, disconnect switches, and station connections. Install one new 115kV series bus tie breaker.
5.	Boonville - Porter Rebuild	Rebuild the T4020 Boonville Porter #1 and T4030 Boonville Porter #2 115kV lines as two single circuit lines.
6.	Boonville Substation - PAR	Install two 115kV phase angle regulators on the 115kV Boonville-Rome #3 & #4 lines at the future Boonville Greenfield Station location. Install 4 new 115kV circuit breakers with disconnects.
7.	Bremen Thermal Upgrades	Replace existing disconnects #63, #64, and #8104 with new 3000A units. Disconnect switches #63 and #64 will be converted to motor operated disconnects.
8.	Clay Thermal Upgrades	Relocate bussed portion the bussed portion of the #7 line to become the second 115kV transmission line terminating at the position presently occupied by the #5 line at the Clay Station. Replace 6 breakers and 14 gang-operated disconnects. Install new 2000A breaker between R180 and R115, new set of 3 115kV CCVTs, and 1 new set of 2000A gang-operated disconnects with arching horns. Overhead strain bus and connections between breakers and nearby disconnects will be replaced in #5, #6, and #7 bays.

9.	Coffeen - Black River Rebuild	Rebuild the 7.5 mile single circuit 115kV Coffeen-Black River LN3 (T3120) line.
10.	Coffeen - East Watertown Rebuild	Rebuild the 7.5 mile single circuit and 2.0 mile double circuit sections of the 115kV T2120 Coffeen Lighthouse Hill Black River #5.
11.	Coffeen - Lyme Junction Rebuild	Rebuild the 7.4 mile single circuit section of the 115kV Thousand Islands-Coffeen #4 (T3350) line from Coffeen station to Lyme junction.
12.	Coffeen Synchronous Condensers	Expand Coffeen station to install two (2) 150MVar Synchronous Condensers. Install associated power transformers and equipment and buildings.
13.	Colton - Nicholville Rebuild	Rebuild approximately 18.3-miles of single circuit 115kV and replace structures in right-of-way.
14.	Colton Thermal Upgrades	Replace existing disconnects #34 with new 115kV 1200A rated disconnects, replace the existing current limiting conductors in the line #3 bay with new 1272 45 7 ACSR.
15.	Dennison Thermal Upgrades	Replace the existing conductor between the take-off structure and disconnects in bays #1, 2, 4, 5, and 12 with new 2000AL 91 Strand or equivalent conductor.
16.	East Ave Substation	Construct a new 115kV four breaker ring bus transmission station along the right-of-way for the South Oswego-Nine Mile Point #1 line south of East Ave where the South Oswego-Indeck #6 and the Indeck-Lighthouse Hill #2 lines head north towards Indeck.
17.	East Watertown Thermal Upgrades	Replace the existing motor operated disconnects #52 and #53, and gang operated disconnects #8107 with new 3000A units.
18.	Lighthouse Hill - Clay Rebuild	Rebuild the 26.6 mile bussed Lighthouse Hill Clay 7 115kV line as two single circuits.
19.	Lighthouse Hill - South Oswego Rebuild	Rebuild the 27.3 miles of double circuit and 1.2 miles of single circuit sections of the Lighthouse Hill - South Oswego corridor.
20.	Maiden Lane Substation	Construct a new 115kV breaker-and-a-half station connecting to six transmission lines on a greenfield site.

21.	Ames Road Substation	Construct new 115kV transmission station along the right-of-way for the Indeck-Lighthouse Hill #2 and South Oswego-Nine Mile Point #1 lines east of Maiden Lane Road.
22.	McIntyre - Colton DLR Installation	Install 18 dynamic line rating monitors from LineVision on the McIntyre - Colton #8, including any work required for access.
23.	Staplin Creek Substation	Convert existing Middle Road station to a six-breaker ring station.
24.	North Carthage Thermal Upgrades	Replace 2 existing circuit breakers R10 and R80 with new 115kV, 3000A circuit breakers and replacement of 4 disconnects #11, #13, #83, and #81 with new 115kV 3000A gang-operated disconnects with arcing horns. The conductor drops from the line terminations to each line's new breaker in the R10 and R80 bays will be replaced with new 2-1272 AAC. The existing relaying and control will be replaced for lines #1 and #8.
25.	South Oswego Thermal Upgrades	Replace 2 existing circuit breakers R10 and R60 with new 115kV, 3000A circuit breakers and the 4 gang-operated disconnects #11, #13, #61, and #63 with new 115kV 3000A gang-operated disconnects with arcing horns. The existing conductor drops from the line terminations to the breaker R10 and R60 will be replaced with new 2-1272 AAC. This station will also require the replacement of the RTU along with new digital line relaying, metering, and control handles for lines #1 and #6.
26.	Taylorville - Boonville Rebuild	Rebuild the 33.9 mile double circuit T3320 Taylorville Boonville #5 and T3330 Taylorville Boonville #6 as two single circuit lines.
27.	Beaver River Substation & Synchronous Condensers	Rebuild existing Taylorville Station on a greenfield location. Install Synchronous Condensers with associated power transformers and equipment and buildings.

**NMPC Phase 2 Projects Currently Expected To Proceed
Through the New York State Siting Approval Process**

	Project Name	Project Description
1.	Black River - Lighthouse Hill Rebuild	Rebuild existing double circuit Black River-Lighthouse Hill 115kV lines as two single circuits for 35.4 miles.
2.	Black River - North Carthage - Taylorville Rebuild	Rebuild the existing double circuit Black River-North Carthage-Taylorville 115kV lines as two single circuits for 26.0 miles.
3.	Boonville - Porter Rebuild	Rebuild existing double circuit Boonville-Porter 115kV lines as two single circuits for 26.7 miles.
4.	Boonville Substation - PAR	Install Phase Angle Regulators (PAR) at the rebuilt Boonville Substation.
5.	Colton - Nicholville Rebuild	Rebuild the existing single circuit Colton-Malone 115kV line between Colton and Nicholville as a single circuit for 18.3 miles.
6.	East Ave Substation	Construct a new 115kV greenfield four breaker ring bus substation interconnecting five 115kV lines.
7.	Lighthouse Hill - Clay Rebuild	Rebuild the existing bussed Lighthouse Hill-Clay 115kV line as two single circuits for 26.5 miles.
8.	Lighthouse Hill - South Oswego Rebuild	Rebuild the existing double circuit Lighthouse Hill-South Oswego 115kV lines as two single circuit for 28.7 miles.
9.	Maiden Lane Substation	Construct a new 115kV greenfield Breaker and a Half (BAAH) substation interconnecting six 115kV lines.
10.	Ames Road Substation	Construct a new 345kV/115kV greenfield BAAH substation interconnecting four 345kV lines and four 115kV lines.
11.	Staplin Creek Substation	Construct a new 115kV greenfield BAAH substation interconnecting six 115kV lines.
12.	Taylorville - Boonville Rebuild	Rebuild the existing double circuit Taylorville-Boonville 115kV lines as two single circuits for 33.4 miles.
13.	Beaver River Substation & Synchronous Condensers	Construct a new 115kV greenfield BAAH substation interconnecting seven 115kV lines and four 23kV lines and install 3 +/-25MVAR Synchronous Condensers at the substation.