

Queue Interconnection Studies of Projects Potentially Affecting Neighboring Systems

IPSAC WebEx

Zamiyad Dar

SENIOR PLANNING ENGINEER, NYISO



Summary

- Projects in the respective ISO/RTO interconnection queues may have potential interregional effects on neighboring systems
 - This requires coordination of studies across ISO/RTO borders
- The Joint ISO/RTO Planning Committee continues to
 - Coordinate system data bases and models
 - Identify and evaluate the performance of projects affecting interregional system performance
- The ISO/RTO interconnection queues can be found at:
 - <https://www.iso-ne.com/irq>
 - <https://www.nyiso.com/interconnections>
 - <https://www.pjm.com/planning/services-requests/interconnection-queues.aspx>
- Several projects will now be discussed with the IPSAC
 - Slides show the effective date of April 1, 2021 for every ISO/RTO Queue
 - Changes from the December 14, 2020 IPSAC meeting are shown in red

NYISO TRANSMISSION AND GENERATION PROJECTS WITH POTENTIAL INTERREGIONAL IMPACTS

Zamiyad Dar – NYISO

NYISO Interconnection Queue Projects with Potential ISO-NE/PJM Impact

| Transmission Project | Queue Number(s) | Zone(s) | Regions Affected | Proposed I/S Date |
|----------------------------------------------------------|-----------------|--------------|------------------|----------------------|
| Grand Isle Intertie Development | 386 | D | ISO-NE | 12/2023 |
| Champlain Hudson (CH) Interconnection | 458 | J | ISO-NE / PJM | 10/2026 |
| Hudson Transmission Partners NY to PJM | 465 | J | PJM | WITHDRAWN |
| Empire State Connector HVDC | 506 | E, J | ISO-NE / PJM | 10/2025 |
| PPL Electric Utilities Compass | 518 | G | PJM | 12/2023 |
| AVANGRID Connect NY Edic – PV | 540 | E, G | ISO-NE / PJM | 12/2020 |
| AVANGRID Connect NY Edic – Ramapo | 541 | E, G | ISO-NE / PJM | 12/2020 |
| National Grid Segment B Knickerbocker-PV | 543 | F, G | ISO-NE / PJM | 09/2022 |
| LS Power Segment A Double Circuit | 556 | E, F | ISO-NE / PJM | 06/2020 |
| GridAmerica Holdings Alps - Berkshire | 632 | F | ISO-NE | 09/2021 |
| ITC Lake Erie Connector | 684 | A | PJM | 03/2024 |
| LIPA NNC TTC Increase | 816 | K | ISO-NE | 12/2023 |
| Barrett Ridge Energy - PARs | 1013 | G | PJM | 04/2024 |
| Catskills Renewable Connector | 1120 | F, J | ISO-NE / PJM | 06/2026 |
| Werner - Ravenswood | 1121 | J | ISO-NE / PJM | 12/2026 |
| Northern New York Priority Transmission Project (NNYPTP) | 1125 | D, E | ISO-NE | 12/2025 |
| Excelsior Connect - Edic to Railey | 1131 | E, J | ISO-NE / PJM | 10/2025 |
| Excelsior Connect - Edic to Farragut | 1132 | E, J | ISO-NE / PJM | 10/2025 |

NYISO Interconnection Queue Projects with Potential ISO-NE/PJM Impact (Cont.)

| Generation Project | Queue Number(s) | Zone(s) | Regions Affected | Proposed I/S Date | MW |
|-----------------------------------------------------------------------------------|-----------------|--------------|------------------|----------------------|----------------|
| Atlantic Wind Bone Run | 466 | A | PJM | WITHDRAWN | 132 |
| Renovo Energy Center | 496 | C | PJM | WITHDRAWN | 480 |
| Tioga County Power | 498 | C | PJM | WITHDRAWN | 550 |
| North Park Energy SW Energy | 595 | A | PJM | 10/2021 | 100 |
| Invenergy Alle Cat II Wind | 596 | A | PJM | 02/2023 | 339 |
| Renovo Energy Center Uprate | 693 | C | PJM | 10/2020 | 515 |
| Seven Creek Energy | 809 | A | PJM | 03/2022 | 240 |
| Diamond Generating Corporation CWW 300 Wind Dun | 814 | A | PJM | WITHDRAWN | 300 |
| EDF Renewables Genesee Road Solar Energy Center | 858 | A | PJM | 09/2024 | 350 |
| Seven Creek Energy - Squab Hollow (Energy Storage Project Located in PJM) | 933 | A | PJM | 01/2023 | 290 |
| Empire Solar | 954 | A | PJM | 08/2023 | 158 |
| Renewable Energy Aggregators, Inc. - Mifflin | 1004 | E | PJM | 01/2024 | 300 |
| Vineyard Wind I | 1010 | K | ISO NE | 07/2026 | 1400 |
| Vineyard Wind II | 1011 | K | ISO NE | 07/2026 | 1400 |
| South Ripley BESS | 1014 | A | PJM | 09/2022 | 20 |
| Equinor Wind US - El Fort Salonga | 1020 | K | ISO NE | 12/2026 | 1300 |
| Equinor Wind US - El East Shoreham | 1021 | K | ISO NE | 12/2026 | 1300 |
| Equinor Wind US - El Glenwood Landing | 1022 | K | ISO-NE | 12/2026 | 1300 |
| Renewable Energy Aggregators, Inc.—Cuomo Hydro 1 | 1024 | H | PJM | WITHDRAWN | 300 |
| Juno Power Management - Mainesburg ESS (Energy Storage Project Located in PJM) | 1036 | C | PJM | 02/2022 | 300 |

NYISO Interconnection Queue Projects with Potential ISO-NE/PJM Impact (Cont.)

| Generation Project | Queue Number(s) | Zone(s) | Regions Affected | Proposed I/S Date | MW |
|------------------------------------------------------------------------------------------|-----------------|---------|------------------|-------------------|------|
| Juno Power Management - East Sayre ESS <i>(Energy Storage Project Located in PJM)</i> | 1037 | C | PJM | 02/2022 | 75 |
| Fort Edward Solar Farm (NY53) | 1042 | F | ISO-NE | 10/2024 | 100 |
| Bay State Wind - NY Wind - Pilgrim | 1058 | K | ISO-NE | 01/2026 | 1275 |
| Mineral Basin Solar Power <i>(Energy Storage Project Located in PJM)</i> | 1080 | C | PJM | 01/2023 | 400 |
| SED NY Holdings LLC - Kingbird Solar | 1098 | A | PJM | 10/2022 | 20 |
| Ray Solar, LLC | 1100 | F | ISO-NE | 06/2024 | 20 |
| Chestertown BESS | 1101 | F | ISO-NE | 06/2022 | 20 |
| Troupsburg Solar | 1102 | C | PJM | 11/2023 | 20 |
| Buchanan Point BESS III | 1107 | H | ISO-NE / PJM | 03/2024 | 300 |
| Bangor Solar | 1108 | D | ISO-NE | 11/2023 | 107 |
| CLIES 10MW | 1112 | K | ISO-NE / PJM | 03/2022 | 10 |
| CLIES 20 MW | 1113 | K | ISO-NE / PJM | 03/2022 | 20 |
| Wading River Energy Center | 1114 | K | ISO-NE / PJM | 09/2023 | 50 |
| Flat Creek Solar 2 | 1115 | F | ISO-NE | 08/2024 | 100 |
| CLIES 70MW | 1117 | K | ISO-NE / PJM | 09/2022 | 70 |
| Fuller Storage | 1119 | G | ISO-NE / PJM | 08/2023 | 20 |
| KCE NY 29 | 1123 | K | ISO-NE / PJM | 11/2023 | 150 |

NYISO Interconnection Queue Projects with Potential ISO-NE/PJM Impact (Cont.)

| Generation Project | Queue Number(s) | Zone(s) | Regions Affected | Proposed I/S Date | MW |
|-----------------------------------------|-----------------|---------|------------------|-------------------|-----|
| CBB PARK LLC | 1127 | G | ISO-NE | 03/2021 | 50 |
| Northland Power U.S. Projects | 1128 | C | PJM | 03/2021 | 20 |
| Invenergy Solar Project Development LLC | 1138 | F | ISO-NE | 02/2021 | 75 |
| Invenergy Solar Project Development LLC | 1140 | E | ISO-NE | 03/2021 | 205 |
| Minerva Power Connection LLC | 1142 | J | ISO-NE / PJM | 03/2021 | 600 |
| Minerva Power Connection LLC | 1143 | J | ISO-NE / PJM | 03/2021 | 600 |
| Galehead Development, LLC | 1146 | F | ISO-NE | 03/2021 | 100 |
| Wawayanda Solar 1, LLC | 1147 | G | ISO-NE / PJM | 03/2021 | 20 |
| York Run Solar, LLC | 1151 | A | PJM | 03/2021 | 90 |

ISO NEW ENGLAND TRANSMISSION AND GENERATION PROJECTS WITH POTENTIAL INTERREGIONAL IMPACTS

Stojan Nikolov – ISO-NE



ISO New England Interconnection Requests that had, are having, or will need Interregional Coordination

Active Projects

| QP | Type | Requested | Name | Net MW | ST | OpDate | Interconnection Point | SIS |
|------|------|------------|------------------------|--------|----|------------|-------------------------------------------------------------------------------------|-----|
| 501 | ETU | 2/16/2015 | HVDC Tie - Import only | 1000 | VT | 12/31/2027 | HQ 735 kV substation to VELCO 345 kV Coolidge substation | Yes |
| 592 | G | 1/21/2016 | Pumped Storage Upgrade | 66 | MA | 05/31/2022 | GRID 230 kV Bear Swamp substation | Yes |
| 639 | ETU | 4/19/2017 | HVDC Tie | 1000 | ME | 05/31/2023 | CMP Larrabee Rd 345 kV Substation | Yes |
| 640 | ETU | 4/21/2017 | HVDC Tie—Import only | 1200 | MA | 12/31/2022 | Coleson Cove 345kV Substation, New Brunswick to 345kV lines from Pilgrim Substation | No |
| 930 | G | 10/17/2019 | Power Station Increase | 1262 | CT | 05/13/2022 | Eversource's Millstone 345 KV switchyard (15G) | No |
| 1093 | ETU | 02/24/2021 | NB TA#1365950 HVDC | 0 | NB | 01/01/2025 | Salisbury, New Brunswick | No |

QP is Queue Position; ETU is Elective Transmission Upgrade; G is Generator; SIS: Yes means report available, No means system impact study is not complete and no report is available

PJM TRANSMISSION AND GENERATION PROJECTS WITH POTENTIAL INTERREGIONAL IMPACTS

Zach Van Ness— PJM



PJM QUEUE PROJECTS JOINTLY COORDINATED WITH NYISO AND ISO-NE

| Queue ID | Project Description | Fuel Type | Transmission Zones | Total Facility | Capacity Value (MW) | Energy Value (MW) | Project Status |
|----------|--------------------------------------------------------------------------------------------------------------|-----------------|--------------------|----------------------------------------------------------------------------|---------------------|-------------------|-----------------------------|
| Y2-089 | Increase to X4-048 (PJM Project) a combined cycle natural gas facility connected at the Lackawana 230 kV bus | Natural Gas | PPL | 1370 | 370 | 370 | In-service |
| Y3-092 | Merchant transmission project (HVDC) connected at the Erie West 345 kV bus | N/A | PENELEC | 1000 MW firm injection; 500 MW firm withdrawal; 500 MW non-firm withdrawal | | | Engineering and Procurement |
| AA1-111 | Natural gas generating facility along the Moshannon-East Towanda 230 kV line | Natural Gas | PENELEC | 463 | 463 | 463 | Facilities Study |
| AB1-092 | Uprate to the AA1-111 project connected as a tap of the Chapman-Lobo 230 kV line | Natural Gas | PENELEC | 504 | 17 | 41 | Facilities Study |
| AB1-160 | Wind facility uprate to the Z1-069 project tapping the Gold-Sabinsville 115 kV line | Wind | PENELEC | 90 | 3.8 | 20 | In-service |
| AB1-182 | Storage facility connected at the Bear Creek 69kV | Battery/Storage | PPL | 20 | 0 | 20 | Engineering and Procurement |
| AC2-092 | Susquehanna-Lackawanna 500kV | Natural Gas | PPL | 1105 | 65 | 55 | Facilities Study |
| AD1-108 | Grover 34 kV | Natural Gas | PENELEC | 21.4 | 1.5 | 1.5 | In-service |
| AD1-109 | Canton 34.5 kV | Natural Gas | PENELEC | 21 | 1.1 | 1.1 | In-service |
| AD1-110 | North Meshoppen 34.5 kV | Natural Gas | PENELEC | 21.4 | 1.5 | 1.5 | In-service |
| AD1-142 | Milan 34.5 kV | Natural Gas | PENELEC | 21 | 1.1 | 1.1 | In-service |
| AD2-009 | McConnellsburg 138 kV | Solar | APS | 70 | 48.1 | 70 | Facilities Study |

PJM QUEUE PROJECTS JOINTLY COORDINATED WITH NYISO AND ISO-NE

| Queue ID | Project Description | Fuel Type | Transmission Zones | Total Facility | Capacity Value (MW) | Energy Value (MW) | Project Status |
|----------|-----------------------------------------|-----------------|--------------------|----------------|---------------------|-------------------|-----------------------------|
| AD2-035 | Ontelaunee 230 kV | Natural Gas | METED | 630 | 14 | 38.9 | In-service |
| AD2-055 | Moshannon-East Towanda 230 kV | Natural Gas | PENELEC | 548 | 35 | 44 | Facilities Study |
| AE1-051 | East Carbondale-Lackawanna 69kV | Battery/Storage | PPL | 74.5 | 10 | 0 | Facilities Study |
| AE1-059 | Stanton-Summit 230 kV | Hydro | PPL | 500 | 250 | 500 | Facilities Study |
| AE1-128 | Bedford North-Wills Mounain 115 kV | Solar | PENELEC | 120 | 72 | 120 | Facilities Study |
| AE1-160 | Venango 34.5 kV | Solar | PENELEC | 20 | 12.7 | 20 | Engineering and Procurement |
| AE2-074 | Potter 46 kV | Solar | PENELEC | 35 | 15.11 | 35 | Facilities Study |
| AE2-113 | Farmers Valley-Ridgeway 115 kV | Solar | APS | 130 | 62.6 | 130 | Facilities Study |
| AE2-126 | Dubois-Curwensville 34.5 kV | Solar | PENELEC | 20 | 12 | 20 | Suspended – ISA signed |
| AE2-139 | East Towanda-Grover 230 kV | Solar | PENELEC | 100.5 | 60.3 | 100.5 | SIS |
| AE2-224 | Bearrock-Johnstown 230 kV | Solar | PENELEC | 100 | 60 | 100 | Facilities Study |
| AE2-249 | Bedford North-Pennsylvania Hollow 23 kV | Solar | PENELEC | 13.5 | 8.1 | 13.5 | Facilities Study |
| AE2-299 | Erie East 230 kV | Battery/Storage | PENELEC | 160 | 32 | 160 | Facilities Study |
| AE2-344 | Edinboro South-Venango Junction 115 kV | Solar | PENELEC | 116.5 | 69.9 | 116.5 | Facilities Study |

PJM QUEUE PROJECTS JOINTLY COORDINATED WITH NYISO AND ISO-NE

| Queue ID | Project Description | Fuel Type | Transmission Zones | Total Facility | Capacity Value (MW) | Energy Value (MW) | Project Status |
|----------|------------------------------------|-------------------|--------------------|----------------|---------------------|-------------------|--------------------|
| AF1-043 | Moshannon-East Towanda 230 kV | Natural Gas | PENELEC | 640 | 105 | 92 | SIS |
| AF1-006 | Fairview East 34.5 kV | Solar | PENELEC | 20 | 12.8 | 20 | ISA signed |
| AF1-177 | Warren 115 kV | Natural Gas | PENELEC | 62 | 5 | 5 | SIS |
| AF1-170 | Springboro-Venango Junction 115 kV | Solar | PENELEC | 77.5 | 46.5 | 77.5 | Facilities Study |
| AF1-198 | Blossburg #1 CT 34.5 kV | Natural Gas | PENELEC | 22.5 | 2.5 | 2.5 | Under Construction |
| AF1-277 | Lewis Run-Pierce Brook 2 230 kV | Solar | PENELEC | 200 | 67 | 100 | SIS |
| AF1-103 | Warren 34.5 kV | Solar and Battery | PENELEC | 20 | 20 | 20 | Facilities Study |
| AF1-106 | East Sayre 34.5 kV | Solar and Battery | PENELEC | 20 | 20 | 20 | Facilities Study |
| AF1-104 | Erie West 34.5 kV | Solar and Battery | PENELEC | 20 | 20 | 20 | Facilities Study |
| AF1-286 | East Sayre 34.5 kV II | Solar | PENELEC | 13.6 | 8.1 | 13.6 | Facilities Study |
| AF1-287 | Edinboro South 34.5 kV II | Solar | PENELEC | 20 | 12 | 20 | ISA Pending |
| AF1-304 | Titusville-Grandview 115 kV | Solar and Battery | PENELEC | 100 | 60 | 100 | Facilities Study |

PJM QUEUE PROJECTS JOINTLY COORDINATED WITH NYISO AND ISO-NE

| Queue ID | Project Description | Fuel Type | Transmission Zones | Total Facility | Capacity Value (MW) | Energy Value (MW) | Project Status |
|----------|--------------------------------------|----------------|--------------------|----------------|---------------------|-------------------|-----------------------------|
| AF1-306 | Squab Hollow 230 kV | Battery | APS | 246.5 | 49.3 | 246.5 | SIS |
| AF1-278 | Lewis Run-Pierce Brook 3 230 kV | Solar | PENELEC | 280 | 53.44 | 80 | SIS |
| AF1-094 | Union City-Cambridge Springs 34.5 kV | Solar | PENELEC | 20 | 12 | 20 | Facilities Study |
| AF1-096 | Titusville-Oil Creek 34.5 kV | Solar | PENELEC | 20 | 12 | 20 | Facilities Study |
| AF1-098 | Four Mile Jct-Corry East 115 kV | Solar | PENELEC | 80 | 48 | 80 | Facilities Study |
| AF1-276 | Lewis Run-Pierce Brook 230 kV | Solar | PENELEC | 100 | 67 | 100 | SIS |
| AF1-217 | Edinboro -Cambridge Springs 34.5 kV | Solar | PENELEC | 20 | 12 | 20 | SIS |
| AF2-010 | Union City-Titusville 115 kV | Solar | PENELEC | 77 | 46 | 77 | Facilities Study |
| AF2-197 | East Towanda 115 kV | Storage | PENELEC | 100.8 | 40.32 | 100.8 | Facilities |
| AF2-235 | Titusville-Oil Creek 34.5 kV | Solar | PENELEC | 30 | 6 | 10 | Facilities |
| AF2-265 | South Troy-Athens 34.5 kV | Solar | PENELEC | 15 | 8.6 | 15 | Engineering and Procurement |
| AF2-282 | Edelle 12.47 kV | Solar; Storage | PPL | 3 | 0 | 3 | Engineering and Procurement |

PJM QUEUE PROJECTS JOINTLY COORDINATED WITH NYISO AND ISO-NE

| Queue ID | Project Description | Fuel Type | Transmission Zones | Total Facility | Capacity Value (MW) | Energy Value (MW) | Project Status |
|----------|---------------------------------------|----------------|--------------------|----------------|---------------------|-------------------|-----------------------------|
| AF2-283 | Greenfield 12.47 kV | Solar; Storage | PPL | 2 | 0 | 2 | Engineering and Procurement |
| AF2-285 | W. Damascus 12.47 kV | Solar; Storage | PPL | 3 | 0 | 3 | Engineering and Procurement |
| AF2-294 | Thompson 34.5 kV | Solar | PENELEC | 20 | 12 | 20 | Facilities |
| AF2-405 | East Sayre 34.5 kV III | Storage | PENELEC | 10 | 10 | 10 | Facilities |
| AF2-406 | Sayre 115 kV | Storage | PENELEC | 75 | 75 | 75 | SIS |
| AF2-412 | Mainesburg 115 kV | Storage | PENELEC | 130 | 130 | 130 | SIS |
| AF2-417 | West Damascus Tap-West Damascus 69 kV | Solar | PPL | 20 | 12 | 20 | Facilities |
| AF2-436 | Wyalusing 34.5 kV II | Natural Gas | PENELEC | 21.4 | 1.5 | 1.5 | In Service |
| AF2-437 | Oxbow 34.5 kV III | Natural Gas | PENELEC | 21.4 | 1.5 | 1.5 | In Service |

Questions

