EVERSOURCE

LOCAL SYSTEM PLAN
2022

Planning Advisory Committee Meeting

October 19, 2022

Update to Eversource LSP for 2022

- The Eversource Local System Plan (LSP) has been revised to incorporate the latest proposed changes to the Eversource Local transmission system for Connecticut, Massachusetts, and New Hampshire.
- The LSP Project List is a cumulative listing of proposed transmission solutions intended to meet local needs.
- This LSP-2022 supersedes Eversource's LSP-2021.

Purpose of the Local System Plan

Per Attachment K – Local, the LSP:

- Describes projected improvements to Non-PTF (Non-Pool Transmission Facilities) that are needed to maintain system reliability
- Reflects:
  - Local Needs Assessments
  - Public Policy Requirements (State, Federal, or Local)
  - Corresponding transmission system plans and future studies
  - Maps indicating project locations
- Identifies:
  - Local Planning Process
  - Criteria, Data, and Assumptions used in the Local System Planning Process

LSP Communication

- ISO-NE posts the materials on the PAC web page prior to the meeting.
- PAC, Transmission Customers, and other Stakeholders have 30 days after the meeting to provide any written comments for consideration by Eversource.
  - Comments to be directed to

David Burnham

Director, Transmission Policy

Eversource

56 Prospect Street

Hartford, CT 06103

Phone: (860) 728-4506

email: david.burnham@eversource.com

LSP Communication (cont.)

- Each PTO (Participating Transmission Owner) is individually responsible for publicly posting and updating the status of its respective LSP and transmission project list on their website in a format similar to the ISO-NE Regional System Plan (RSP) Project List.

- Eversource's project lists are located at:

  https://www.eversource.com/Content/ct-c/about/major-projects-infrastructure/transmission-rates-tariffs-interconnections/ferc-order-890-posting-and-676-e-requirements

Local System Planning Process

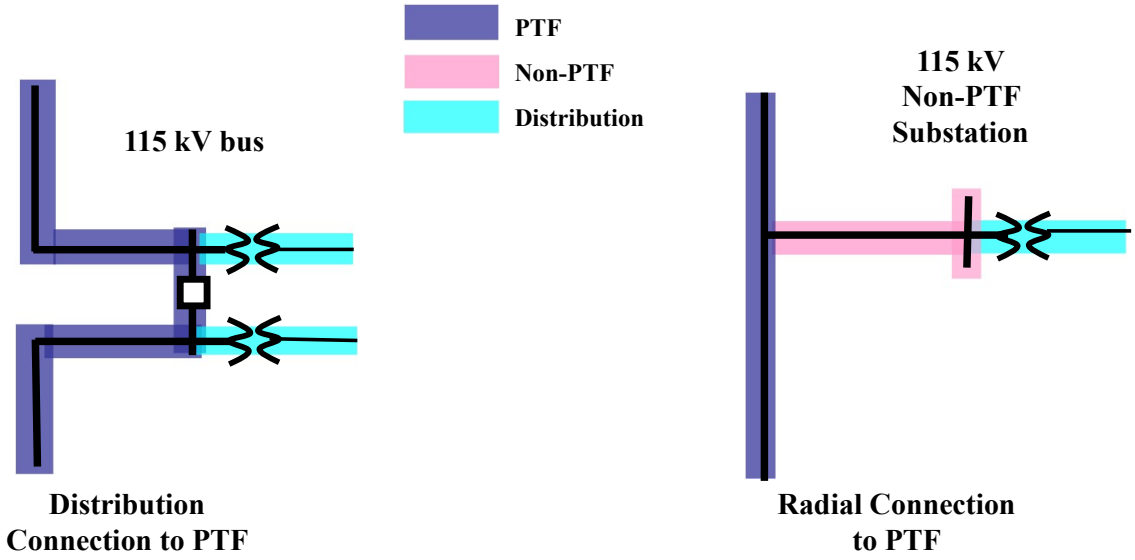
- Local studies can result from:
  - Load growth
  - Area reliability assessments
  - Point of delivery requests from customers
  - Public Policy Requirements (State, Federal, or Local)
  - Other efforts that may impact local facilities (*e.g.*, elective transmission upgrades, reliability transmission upgrades, generator interconnections, short circuit or temporary overvoltage studies)
- The Local System Plan:
  - Summarizes the needs
  - Summarizes the selection of preferred solution
  - Includes Local Projects that are related to projects listed in the RSP

Criteria and Assumptions

- All Eversource local transmission facilities (69 kV and above) are part of the interconnected Eversource system and shall be designed in accordance with criteria described in the Eversource transmission reliability guidelines.
- Eversource complies with NERC, NPCC, and ISO-NE planning criteria.
- The annual ISO-NE CELT Report forecasts for the New England area (90/10) load, with appropriate municipal customer forecasts and/or sub-area forecasts, are used.
  - When local area loads peak at times that are different from the ISO-NE System Peak (basis of CELT Report forecast loads), local substation peak loads may be substituted for the ISO-NE CELT forecast loads.
- Studies use the ISO-NE provided base cases and the ISO-NE short circuit database.

This Local System Plan includes the following types of Transmission System connections

(illustrative examples)



- Eversource has distribution connections and radial transmission connections.

NH, MA, and CT Projects in Regional System Plan

Large-scale reliability assessments may ultimately have Local ramifications. Assessment studies are described in the ISO-NE RSP. Several longer-term assessments have been completed, and others are being conducted. Information about studies being conducted that may affect the local system can be found in the ISO-NE 2021 RSP:

- New Hampshire, RSP sections 5.3 and 5.4.7
- Connecticut, RSP sections 5.3, 5.4.1, 5.4.2, and 5.4.8
- Eastern Massachusetts, RSP sections 5.3, 5.4.4, and 5.4.5
- Western Massachusetts, RSP sections 5.3 and 5.4.3

LSP Project List

- The LSP Project List is a cumulative listing of proposed transmission solutions intended to meet LSP needs.

- The LSP Project List includes the status of each Local Pool Transmission Facility (PTF) project and Non-Pool Transmission Facility (Non-PTF) project. Costs are provided for Proposed, Planned, Under Construction, and In Service categories of projects, using the same guidelines as the various stages of RSP projects. Some projects may have costs yet to be determined.

  - **Concept** - Project is under consideration as a possible solution to a need, for which there is little to no analysis available.

  - **Proposed** – Eversource has determined that the project is an appropriate solution to the need, but a Proposed Plan Application (PPA) is not yet filed.

  - **Planned** - PPA has been filed and approved by ISO-NE.

  - **Under Construction** - Final engineering and internal approvals completed and project being implemented.

  - **In Service** - Project completed.

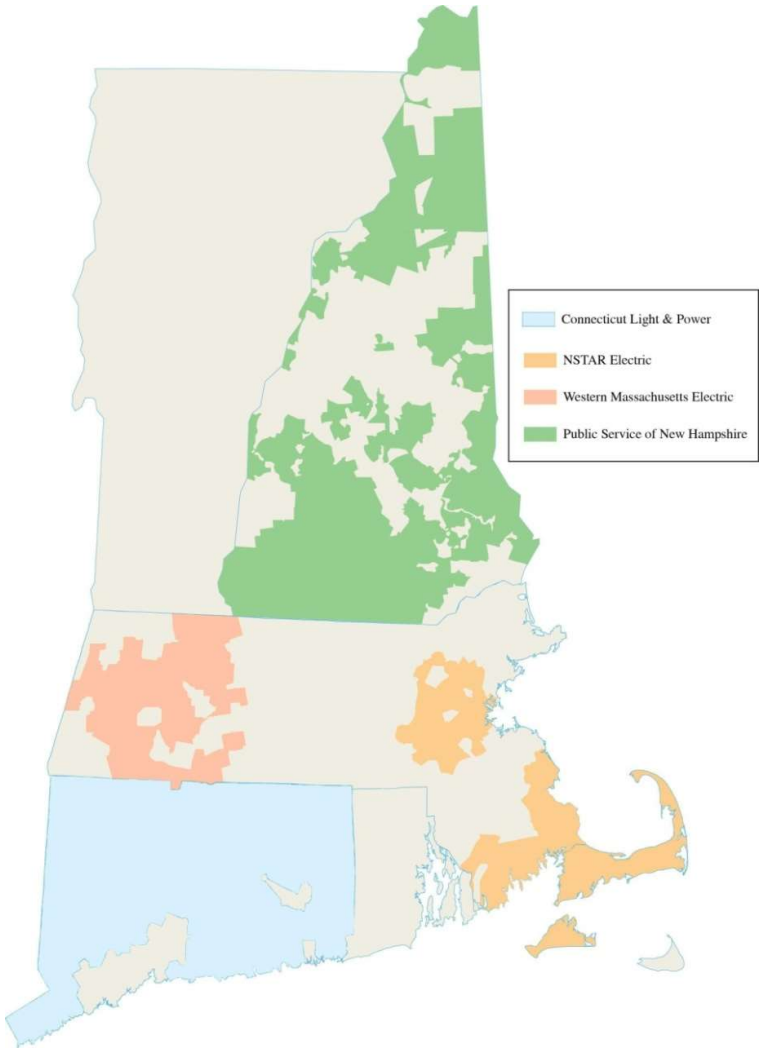
Eversource Service Territories

Eversource operates in three states:

Connecticut

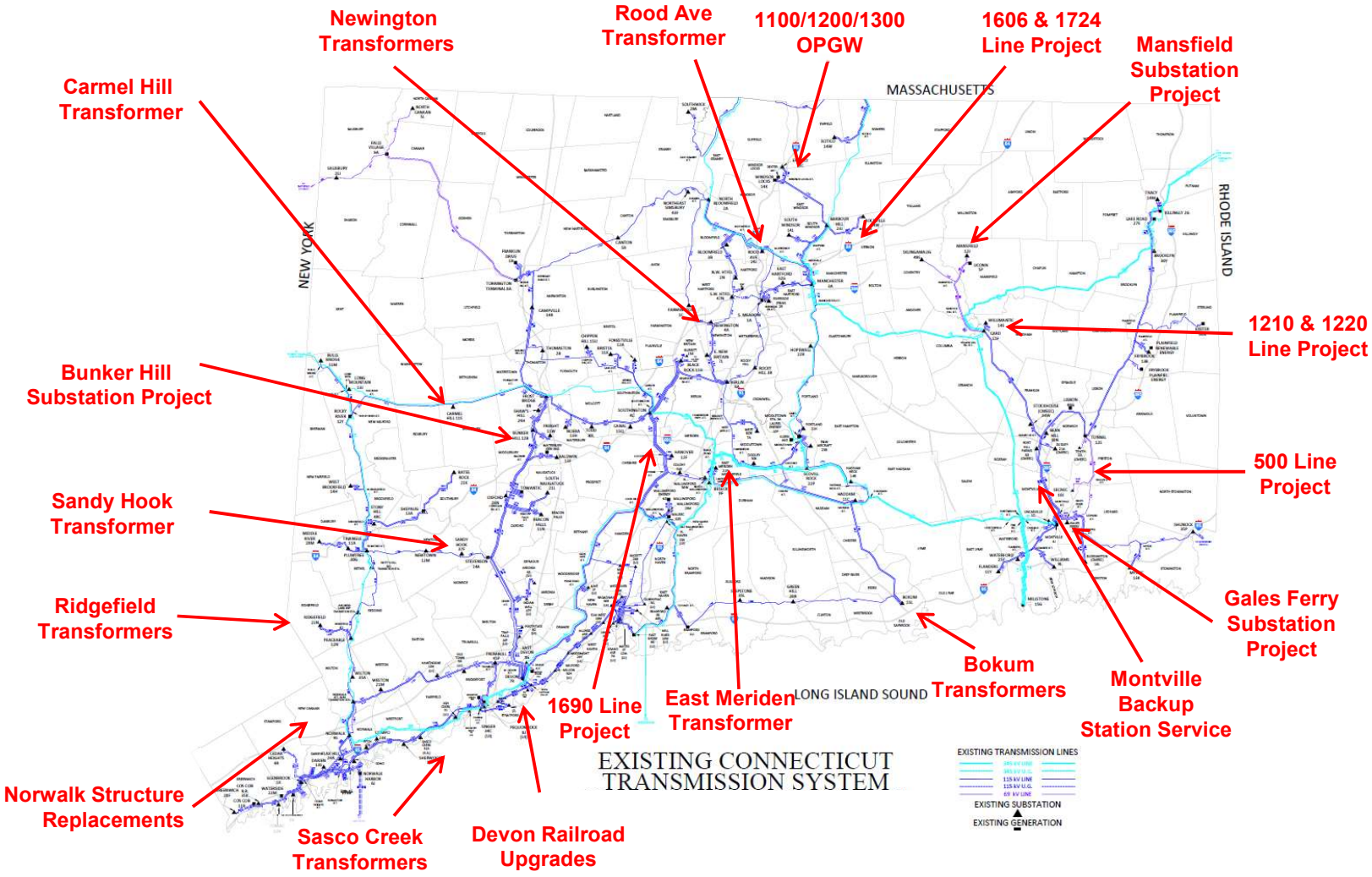
Massachusetts

New Hampshire



Connecticut Projects

Proposed, Planned, Under Construction, and In-Service projects only



Local System Plan – Connecticut

Status of project descriptors in blue have changed from previous LSP or are newly listed

Eversource Local Area Projects - Connecticut					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Local Reliability	Dec-21	Greater Hartford	Newington Substation - Transformer replacements (Newington)	In-Service	Replacement of aging 1X and 3X 115/23-kV, 45 MVA transformers with two new 115/23-kV, 62.5 MVA transformers.
Local Reliability	Mar-22	Greater Hartford	Rood Avenue Substation - Transformer addition (Windsor)	In-Service	Add a second 115/23-kV, 62.5 MVA, transformer to increase capacity and improve reliability.
Asset Condition/ Local Reliability	May-22 $11.0M	Greater Hartford	115-kV Line 1724/ 1606 Copper Retirement	In-Service	Replace deteriorating copper materials with ACSS conductor and OPGW shield wire
Asset Condition	Nov-22 $6.444	Eastern	1210 and 1220 115 kV Line Structure Replacements and Optical Ground Wire (OPGW) installation	Under Construction	Replace existing structures due to Asset Condition and install OPGW.
Local Reliability	Nov-22	Western	East Meriden 21P - Transformer Replacement Project	Under Construction	Replacement of 1X 46.7 MVA transformer 115/13.8 kV with new 62.5 MVA transformer
Local Reliability	Feb-23 $11.5M	Eastern	Montville 69kV Backup Supply	Under Construction	Install one 115/69-kV autotransformer at Montville 69-kV to provide backup to Station Service
Local Reliability	Apr-23 $14.6M	Eastern	Mansfield Substation - Transformer additions and removal (Mansfield)	Under Construction	Install two 115/23-kV, 62.5 MVA transformers and eliminate the single 27.6-kV transformer.
Asset Condition/ Local Reliability	May-23 $24.3M	Eastern	115-kV Line 500 Copper Retirement	Under Construction	Replace deteriorating copper materials with ACSS conductor and OPGW shield wire
Local Reliability	May-23	Southwest	Ridgefield Substation - Transformer Replacements	Planned	Replacement of two aging 115/13.8 kV 46.7 MVA transformers with two new 62.5 MVA transformers.
Asset Condition/Local Reliability	Jun-23 $15.0M	Greater Hartford	115-kV Lines 1100/1200/1300 - OPGW and Reconductor CT River Crossing	Under Construction	Replace deteriorating copper and alumoweld shield wire with OPGW as well as deteriorating copper conductor with 1590 ACSS conductor.

Local System Plan – Connecticut (continued)

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Eversource Local Area Projects - Connecticut					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Local Reliability	Oct-23 $6.8M	Northwest	Carmel Hill Substation - Transformer addition. (Woodbury)	Planned	Add a second 115/23-kV transformer 62.5 MVA to the substation to increase capacity and improve reliability.
Local Reliability	Dec-23	Eastern	Gales Ferry Substation - Rebuild substation and add transformers	Under Construction	Convert substation from 69 kV to 115 kV to support Eastern Connecticut Solution. Replace existing transformers with two new 62.5 MVA transformers.
Local Reliability	Dec-23	Southwest	Sandy Hook Substation - Transformer addition (Newtown)	Planned	Add a second 115/23-kV transformer 62.5 MVA to the substation to increase capacity and improve reliability.
Local Reliability	Dec-23	Southwest	Sasco Creek Substation - Metro North to replace transformers (Westport)	Proposed	Replacement of aging 1X and 2X 115/27.6-kV transformers.
Local Reliability	2024 $19.4M	Southwest	Bunker Hill Substation reconfiguration (Waterbury)	Planned	Reconfigure the Bunker Hill 115 kV substation into a six breaker ring bus including substation modifications.
Asset Condition/ Local Reliability	2024	Southwest	115-kV Line 1690 Copper Retirement	Proposed	Replace deteriorating copper materials with ACSS conductor and OPGW shield wire
Asset Condition/ Local Reliability	2024	Greater Hartford	115-kV Line 1820/1830 Copper Conductor Replacement/ rebuild	Concept	Replace deteriorating structures and obsolete conductor
Local Reliability	2024	Eastern	Southington Substation - Transformer replacement (Southington)	Concept	Add a 115/13.8 kV 62.5 MVA transformer to increase capacity and improve reliability.
Local Reliability	2024	Northwest	Salisbury Substation - Transformer replacement (Salisbury)	Concept	Replacement of aging 69/13.2 kV transformer with a new 62.5 MVA transformer.
Local Reliability	2024	Eastern	Skungamaug Substation - Transformer replacement (Coventry)	Cancelled	Replacement of aging 69/13.8 kV transformer with a new 62.5 MVA transformer.

Local System Plan – Connecticut (continued)

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Eversource Local Area Projects - Connecticut					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Asset Condition / Local Reliability	2024	Eastern	Hopewell 22R - Transformer Replacements	Concept	Replacement of two 46.7 MVA aging transformers 115/23 kV with two new 62.5MVA transformers
Local Reliability	2024	Northwest	Campville 14R - Circuit Breaker & 1788-1900 Single DCT Split	Concept	Install 115-kV series circuit breaker 4TA and split single double circuit tower (DCT) 1788-1900
Local Reliability	2025	Southwest	Devon Railroad 26M - Oil Circuit Breaker and Transformer Replacement Project	Under Construction	Upgrades to the Devon Railroad 26M substation associated with Metro North and CDOT.
Local Reliability	2025	Eastern	Bokum Substation - Transformer replacements (Old Saybrook)	Planned	Replacement of aging 115/27.6 kV transformers with new 62.5 MVA transformers.
Local Reliability	2025	Southwest	Norwalk -CDOT replace structures at Norwalk River crossing (Norwalk)	Proposed	Replace 115 kV structures at Norwalk River crossing
Local Reliability	2025	Northwest	Falls Village Substation - Transformer replacement (Canaan)	Concept	Replacement of aging 69/13.2 kV transformer with a new 62.5 MVA transformer.
Local Reliability	2025	Northwest	Franklin Drive Substation - Transformer replacements (Torrington)	Concept	Replacement of aging 4X and 5X 115/13.2-kV, 25 MVA transformers with two new 115/13.2-kV, 62.5 MVA transformers.
Asset Condition / Local Reliability	2025	Western	Beacon Falls 11N - Transformer Replacements	Concept	Replacement of two 46.7 MVA aging transformers 115/13.8 kV with two new 62.5MVA transformers
Local Reliability	2025	Eastern	Mansfield-area upgrades	Concept	New substation and associated upgrades to support retail load growth in Mansfield (UConn campus)
Asset Condition/ Reliability	2025	Northwest	North Canaan - Transformer Replacement	Concept	Replace the existing wye-wye transformer with a delta-wye to match the surrounding area and improve reliability. Add new feeder position. Replace ageing infrastructure.

Local System Plan – Connecticut (continued)

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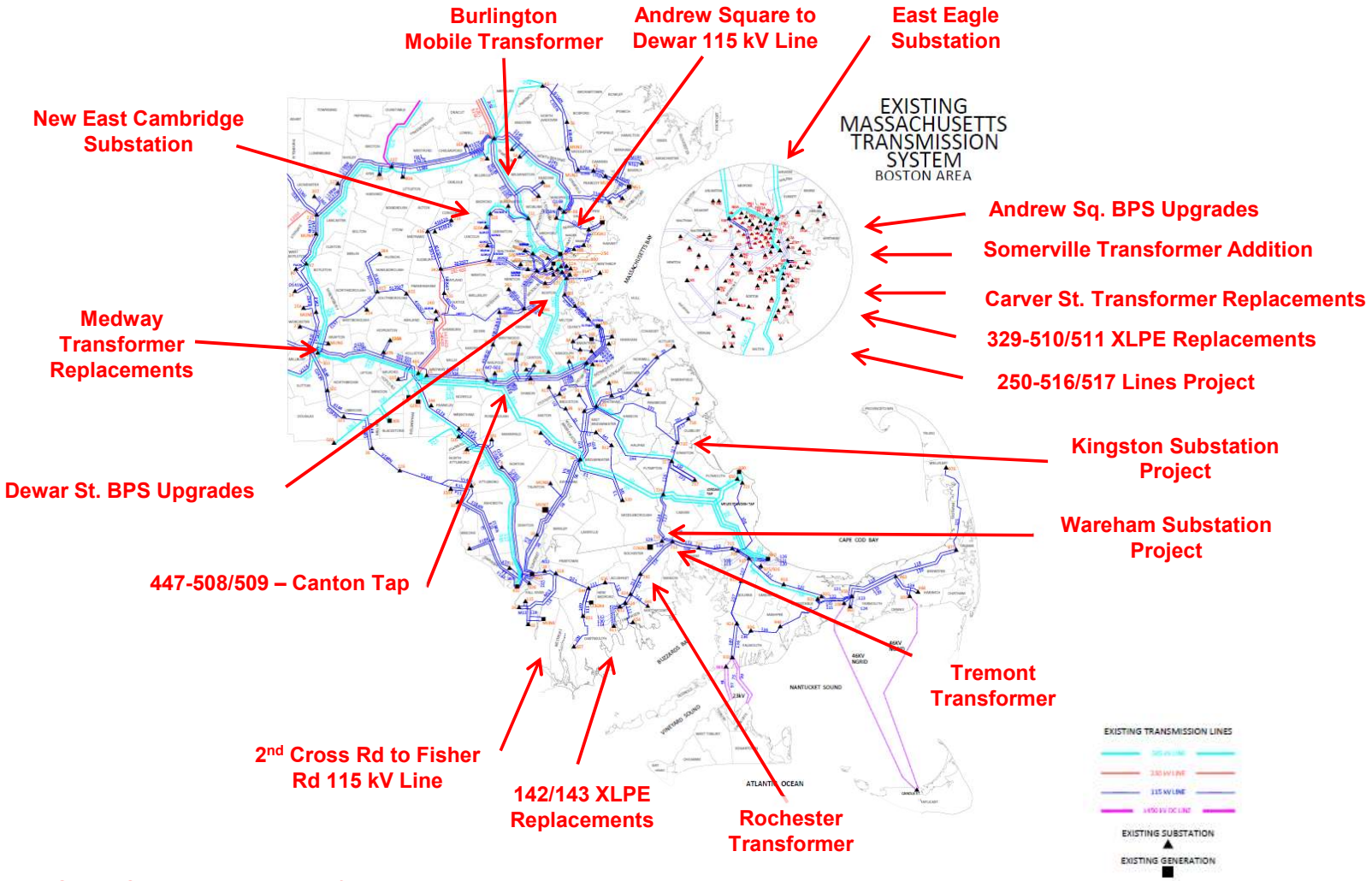
Eversource Local Area Projects - Connecticut					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Asset Condition/ Reliability	2026	Southwest	115-kV Line 1753-1792 XLPE Replacement	Concept	Replace pipe-type cable (PTC) circuits between Glenbrook 1K and Cedar Heights 4R with solid dielectric cross-linked polyethylene (XLPE) technology
Asset Condition/ Reliability	2026	Southwest	115-kV Line 1270-1337 XLPE Replacement	Concept	Replace pipe-type cable (PTC) circuits between Triangle 11A and Middle River 28M with solid dielectric cross-linked polyethylene (XLPE) technology
Local Reliability	2031	Western	Burrville 29J New Bulk Station	Concept	New 115 kV bulk substation in Torrington, CT with two 62.5 MVA transformers supplied via one 115 kV transmission line from a new switching station near Weingart Road Junction in Harwinton, CT

Eastern Massachusetts Projects

Proposed, Planned, Under Construction, and In-Service projects only*



*DER Group Study projects not reflected

Local System Plan – Eastern Massachusetts

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Eversource Local Area Projects - Eastern Massachusetts					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
DER Interconnections	Dec-21	SEMA	Wareham Station #714 Upgrade project	In-Service	"Double end" the existing single ended Wareham station with a 45/60/75 MVA 115/23 kV transformer #2 and associated equipment, including a 115 kV circuit switcher, 23 kV bus section, and a 23 kV 4.8 MVAR capacitor bank.
Local Reliability	May-23	NEMA	~~North~~ Burlington Sta #391 – Mobile Transformer	Under Construction	Install one 50 MVA 115/14 kV mobile transformer.
Asset Condition/ Local Reliability	May-23 $7.2M	NEMA	115-kV Line 117-502 and 117-508 structure replacements and OPGW - Canton Tap	Under Construction	Replace existing structures due to reliability concerns and asset condition.
Local Reliability	Dec-23 $33.4M	SEMA	Kingston Substation #735 - Transformer replacements	Under Construction	Replace both 115/23-kV 20 MVA transformers with 50 MVA transformers.
Local Reliability	Dec-23 $43.6M	NEMA	Reconductor 250-516/517 Lines North Washington St Bridge	Under Construction	The city of Boston is replacing the North Washington St. bridge. The lines will be relocated to the new bridge and reconductored utilizing XLPE cable.
Local Reliability	Dec-23	NEMA	Somerville #402 - Transformer addition	Under Construction	Install a 3rd 62.5MVA transformer at Somerville #402. Serve as interim solution to East. Cambridge overload.
Local Reliability	2024	NEMA	Medway Substation #65 - Transformer Replacement	Under Construction	Replace the 115/13.8-kV 110A transformer with a 62.5 MVA transformer.
Local Reliability	2024	NEMA	Medway Substation #65 - Transformer Replacement	Under Construction	Replace the 115/13.8-kV 110B transformer with a 62.5 MVA transformer.
Local Reliability	2024 $96.3M	NEMA	Andrew Square to Dewar, new 115-kV Line	Planned	Install new 115-kV transmission line between Andrew Square and Dewar stations to provide alternative source to either station under N-1 contingencies.
Asset Condition/ Local Reliability	2024 $26.7M	NEMA	Andrew Sq STA #106 BPS Upgrades	Planned	Build new control house and upgrade substation to BPS standards

Local System Plan – Eastern Massachusetts (continued)

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Eversource Local Area Projects - Eastern Massachusetts					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Asset Condition/ Local Reliability	2024 $24.8M	NEMA	Dewar St Sta #483 BPS Upgrades	Planned	Build new control house and upgrade substation to BPS standards
Local Reliability	2025 $9.3M	NEMA	Carver St. Substation #71 - Transformer replacements	Under Construction	Replace both 115/13.8-kV 110A and 110B transformers with 90 MVA transformers.
Local Reliability~~/DER Interconnections~~	2025	SEMA	Rochester Substation #745 - Transformer replacement	Planned	Replace the 115/13.8 kV 12.5 MVA transformer #114 with new 62.5 MVA 115/14-kV transformer.
DER Group Study	2025 $25M	SEMA	Line 112 extension to Crystal Spring #646	Planned	Extend the 115 kV 112 Line from Crystal Spring Junction to Crystal Spring station for the transformer addition at Crystal Spring
DER Group Study	2025 $14M	SEMA	Crystal Spring #646 Transformer Replacement and Addition	Planned	Replace the Crystal Spring transformer #1 with a new 37/50/62.5 MVA, 115/13.2 kV transformer. Install a new 37/50/62.5 MVA, 115/13.2 kV transformer #2.
DER Group Study	2025 $12M	SEMA	Rochester #745 Transformer Replacement	Planned	Replace the Rochester transformer #112 with a new 37/50/62.5 MVA, 115/13.2 kV transformer
DER Group Study	2025 $5M	SEMA	Wing Lane #624 Transformer Replacements	Planned	Replace the Wing Lane transformer#1 and #2 with new 37/50/62.5 MVA, 115/13.2 kV transformers
Local Reliability	2025	NEMA	East Eagle Substation #131 - New substation	Planned	Install two 115/13.8-kV 62.5 MVA transformers; relieves Chelsea Sta #488.
DER Group Study	2025 $13M	SEMA	Fisher Road #657 Transformer Replacements	Planned	Replace the Fisher Road transformer#1 and #2 with new 37/50/62.5 MVA, 115/13.2 kV transformers
DER Group Study	2025 $27M	SEMA	Line 191 115 kV Line Reconductoring	Planned	Reconductor the 115 kV 191 Line between Auburn Street and Kingston with 1590 ACSS to interconnect DER projects in SEMA and Cape

Local System Plan – Eastern Massachusetts (continued)

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Eversource Local Area Projects - Eastern Massachusetts					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Local Reliability	2025	NEMA	Hawkins Street #2 - Transformer Replacement	Concept	Replace the 115/14-kV 110A transformer with a 90 MVA transformer.
Local Reliability	2025	NEMA	Mystic #250 - 24kV System Retirement	Concept	Replace the 115/24kV 110C transformer with a 62.5 MVA 114/14kV transformer.
Local Reliability	2025	NEMA	Weymouth – New Substation	Concept	Build a new 115 kV three-breaker ring substation to provide a new supply to Hingham Municipal
DER Group Study	2026	SEMA	Wareham #714 Station - Transformer replacement	Planned	Replace transformers #1 with a 45/60/75 MVA, 115/23 kV transformer.
DER Group Study	2026 $23M	SEMA	Line 132 115 kV Line Reconductoring	Planned	Reconductor the 115 kV 132 Line between Brook Street and West Pond with 795 ACSR
DER Group Study	2026 $25M	SEMA	West Pond #737 Station Upgrades - Ring bus, transformer replacements and addition	Planned	Upgrade the West Pond station to a six-breaker ring bus configuration. Replace transformers #1 and #2 with 45/60/75 MVA, 115/23 kV transformers and install a new 45/60/75 MVA transformer #3.
DER Group Study	2026	SEMA	Tremont #713 - Transformer Replacements and Addition	Planned	Replace the Tremont transformer #2 with a new 45/60/75 MVA, 115/23 kV transformers. Install a new 45/60/75 MVA, 115/23 kV transformer #3.
Local Reliability	2026	SEMA	Tremont #713 - Transformer Replacement	Planned	Replace the Tremont transformer #1 with a new 45/60/75 MVA
DER Group Study/ Local Reliability	2026 $82M	SEMA	Bell Rock to Assonet #647 115kV Line	Planned	Build a new 115kV line from Bell Rock to supply new Assonet four (4) breaker ring configuration for DER Group Study
Asset Condition/ Reliability	2026	SEMA	115-kV Line 142/143 XLPE Replacement	Proposed	Replace pipe-type cable (PTC) circuits with solid dielectric cross-linked polyethylene (XLPE) technology

Local System Plan – Eastern Massachusetts (continued)

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Eversource Local Area Projects - Eastern Massachusetts					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
DER Group Study/ Local Reliability	2026 $38M	SEMA	Assonet #647 Station Upgrades	Proposed	Build a new 115/13.2 kV Assonet station with four-breaker ring configuration. Install two new 37/50/62.5 MVA, 115/13.2 kV transformers
Local Reliability	2026	NEMA	Maynard Station #416 - Transformer Replacement	Concept	Replace the 115/14-kV 110A transformer with a 62.5 MVA transformer.
Local Reliability	2026	NEMA	Hawkins Street #2 - Transformer Replacement	Concept	Replace the 115/14-kV 110B transformer with a 90 MVA transformer.
Local Reliability	2026	SEMA	Falmouth Tap Switching Station Upgrade	Concept	Upgrade Falmouth Tap Switching Station from a 1-breaker series bus arrangement to a 115-kV breaker and a half scheme. Install a 115/23-kV bulk distribution station with one 45/50/75 MVA transformer to address area load growth
Local Reliability	2026	SEMA	New Bourne to Falmouth Tap 115-kV Line	Concept	Install a new 115-kV transmission line between Bourne and Falmouth Tap substation to mitigate Consequential Load Loss violations under N-1-1 conditions.
DER Group Study	2026	SEMA	2nd 115kV line to Assonet #647 Substation	Concept	Second 115kV line to the new 115kV Assonet Substations
Local Reliability	2027	NEMA	Maynard Station #416 - Transformer replacement	Concept	Replace the 115/14-kV 110B transformer with a 62.5 MVA transformer.
Local Reliability	2027	NEMA	Saxonville or Natick 115/14kV station	Concept	115/14kV Station either at Saxonville or Mill Street, Natick, Two 65MVA transformer Station
Local Reliability	2027	NEMA	North Burlington - New Substation	Concept	Build a new 115/14 kV station with two 62.5 MVA 115/14 kV transformers.
Local Reliability	2027	NEMA	Hyde Park – New Substation	Concept	Build a new 115/14 kV station in the vicinity of Hyde Park with three 62.5 MVA 115/14-kV transformers.

Local System Plan – Eastern Massachusetts (continued)

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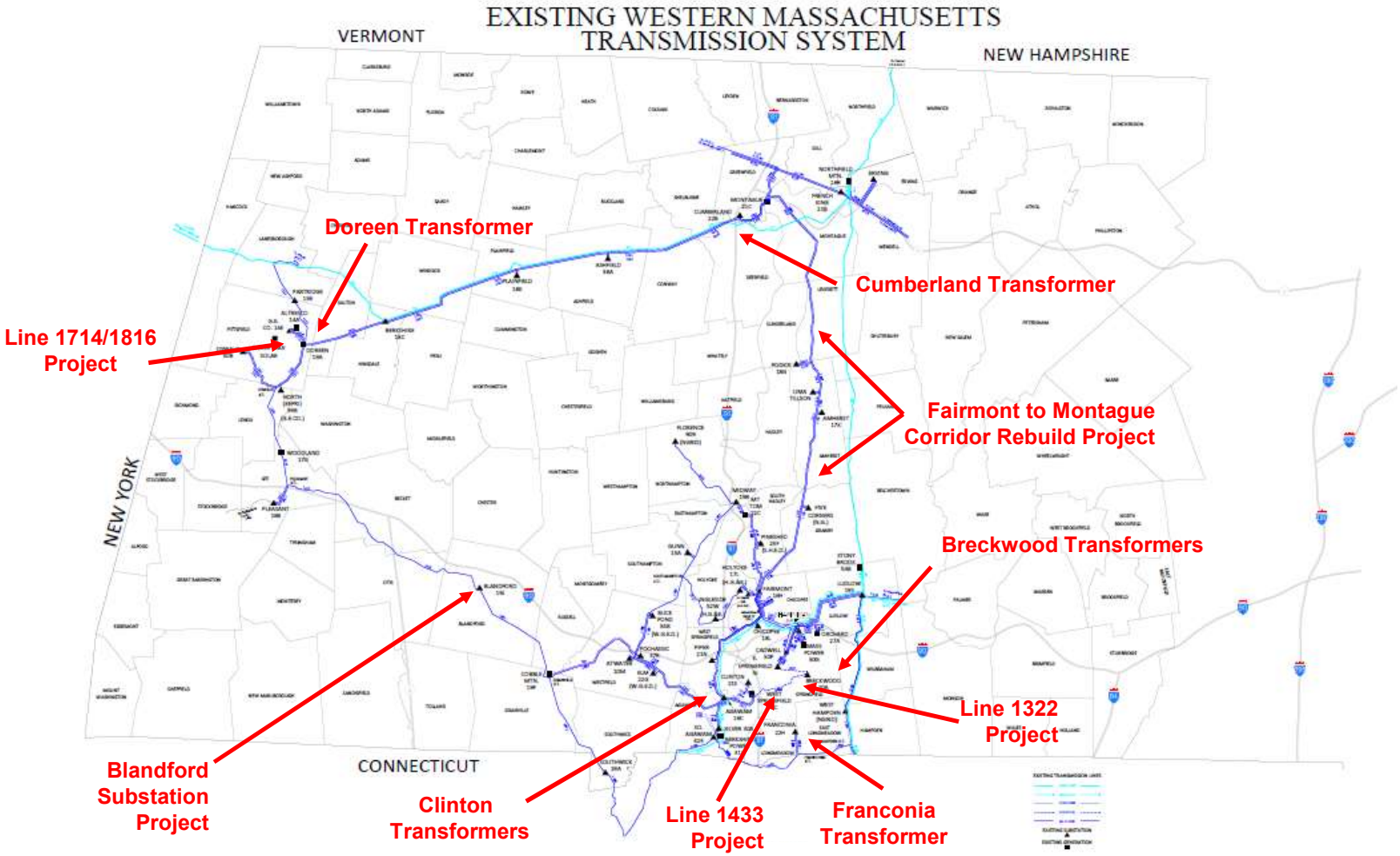
Eversource Local Area Projects - Eastern Massachusetts					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Local Reliability	2027	NEMA	Holbrook #478 - Ring Bus Upgrade	Concept	Add two breakers at the Holbrook 345 kV station to close the ring bus.
DER Group Study	2028	SEMA	Industrial Park #636 Station Upgrades - Ring bus, transformer replacements and addition	Planned	Upgrade the Industrial Park station to a six-breaker ring bus configuration. Replace transformers #1 and #2 with new 37/50/62.5 MVA, 115/13.2 kV transformers and install a new 37/50/62.5 MVA transformer #3
Local Reliability	2028	NEMA	New East Cambridge Substation	Proposed	Install three 90 MVA 115/14-kV transformers which will relieve East Cambridge #875, Putnam #831 and Prospect #819. East Cambridge will be supplied via 329-510/511 lines from Brighton which will be replaced with XLPE cables. The existing 831-538 and 875-539 lines will also interconnect with the new substation.
Asset Condition/ Reliability	2028	NEMA	115-kV Line 250-516/517 XLPE Replacement	Concept	Replace pipe-type cable (PTC) circuits between Mystic and Seafood Way with solid dielectric cross-linked polyethylene (XLPE) technology
Asset Condition/ Reliability	2029	NEMA	115-kV Line 329-510/511 XLPE Replacement	Proposed	Replace pipe-type cable (PTC) circuits between Somerville and Mystic with solid dielectric cross-linked polyethylene (XLPE) technology
Local Reliability	2030	SEMA	Dennis/Brewster - New Substation	Concept	Install new distribution bulk substation with two (2) 115/23kV 45/60/75 MVA transformers

Western Massachusetts Projects

Proposed, Planned, Under Construction, and In-Service projects only



Local System Plan – Western Massachusetts

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Eversource Local Area Projects - Western Massachusetts					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Local Reliability	Oct-21	Greenfield	Cumberland Substation - Transformer replacement (Greenfield)	In-Service	Replace existing 2X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer.
Local Reliability	Mar-22	Springfield	Breckwood Substation - Transformer replacement (Springfield)	In-Service	Replace existing 2X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer.
Local Reliability	May-22	Pittsfield	Doreen Substation - Transformer replacement (Pittsfield)	In-Service	Replace existing 1X 115/23-kV 25 MVA transformer with a 62.5 MVA transformer.
Local Reliability	Dec-22 $136.4M	Greenfield/ Springfield	Fairmont-Montague corridor transmission supply upgrade	Under Construction	Rebuild the 115-kV transmission lines supplying the Amherst, Tillson, Podick, and Five Corners load pocket. Remove existing Type III Special Protection System.
Local Reliability	Jun-23	Springfield	Clinton Substation - Transformer replacement (Springfield)	Planned	Replace existing 3X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer .
Asset Condition	Jun-23	Pittsfield	115-kV Line 1715/1816 Copper Conductor Replacement/ rebuild	Proposed	Replace deteriorating structures, obsolete conductor, and shieldwire
Local Reliability	Sep-23	Springfield	Breckwood Substation - Transformer replacement (Springfield)	Planned	Replace existing 1X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer.
Local Reliability	Dec-23	Springfield	Franconia Substation - Transformer 2X replacement	Planned	Replace existing 2X 115/13.8-kV 47 MVA transformer with a 62.5 MVA transformer .
Local Reliability	Dec-23	Springfield	Clinton Substation - Transformer replacement (Springfield)	Concept	Replace existing 1X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer.

Local System Plan – Western Massachusetts (continued)

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Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Asset Condition/ Reliability	2024	Greenfield	Montague Substation - Transformer replacement (Montague)	Concept	Replace existing 3X 115/13.8-kV 23 MVA transformer with a 62.5 MVA transformer.
Local Reliability	2024	Springfield	Silver Substation – Transformer Replacement (Agawam)	Concept	Replace existing 1X 115/13.8 kV 47 MVA transformer with a 62.5 MVA transformer.
DER Group Study/ Reliability	2025	Springfield	Blandford 19J Substation - Reconfiguration and transformer replacements	Proposed	Replace existing 1X and 2X 115/23-kV transformers with 62.5 MVA transformers to integrate DER and reconfigure the 115kV side
Asset Condition/ Reliability	2025	Pittsfield	Pleasant Substation - Transformer replacement (Pittsfield)	Concept	Replace existing 2X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer .
Local Reliability	2025	Springfield	Ludlow Substation - Add new Transformer 2X	Concept	Install new 2X 115/13.8-kV 62.5 MVA transformer.
Local Reliability	2025	Springfield	West Springfield Substation - Transformer replacement	Concept	Replace existing 1X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer .
Local Reliability	2025	Plainfield	Plainfield Substation - Transformer replacement	Concept	Replace existing 1X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer .
Local Reliability	2025	Springfield	Franconia Substation - Transformer 3X replacement	Concept	Replace existing 3X 115/13.8-kV 47 MVA transformer with a 62.5 MVA transformer .
Asset Condition/ Reliability	2026	Springfield	Clinton Substation - Transformer replacement (Springfield)	Concept	Replace existing 2X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer.

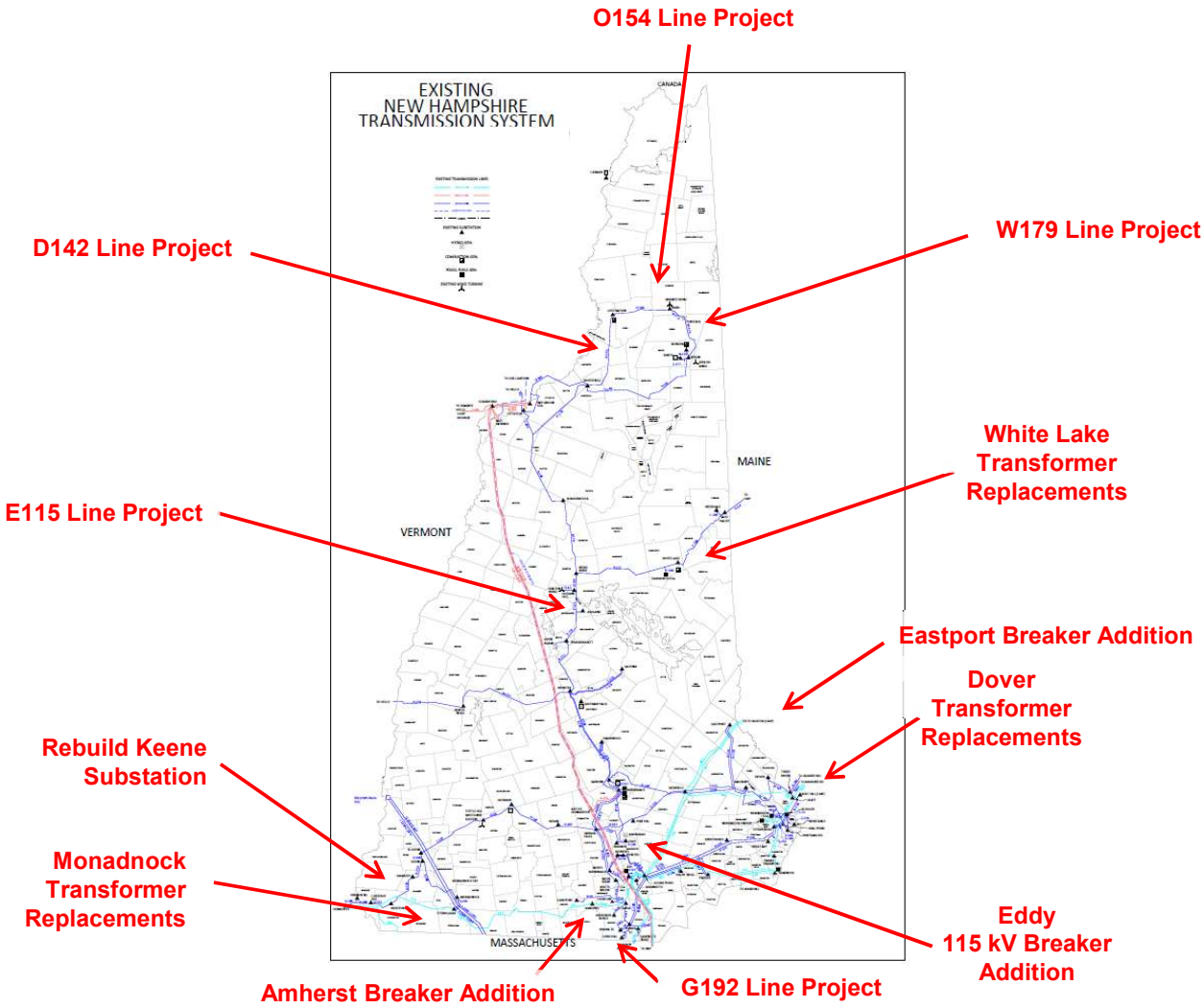
Local System Plan – Western Massachusetts (continued)

Status of project descriptors in blue have changed from previous LSP or are newly listed

Eversource Local Area Projects - Western Massachusetts					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Asset Condition/ Reliability	2026	Springfield	West Springfield Substation - Transformer replacement	Concept	Replace existing 2X 115/13.8-kV 30 MVA transformer with a 62.5 MVA transformer .
Asset Condition/ Reliability	2027	Springfield	Line 1433 115-kV Underground Cable Rebuild	Proposed	Rebuild the existing 1433-line HPFF cable system with solid dielectric cross-linked polyethylene (XLPE) technology
Asset Condition/ Reliability	2027	Springfield	Line 1322 115-kV Underground Cable Rebuild	Proposed	Rebuild the existing 1322-line HPFF cable system with solid dielectric cross-linked polyethylene (XLPE) technology
Asset Condition/ Reliability	2027	Springfield	115-kV Line 1544/1755 XLPE Replacement	Concept	Replace pipe-type cable (PTC) circuits between Clinton and West Springfield with solid dielectric cross-linked polyethylene (XLPE) technology
Asset Condition/ Reliability	2028	Pittsfield	Woodland Substation - Transformer replacement (Pittsfield)	Concept	Replace existing 1X 115/23-kV 25 MVA transformer with a 62.5 MVA transformer.
Asset Condition/ Reliability	2028	Hadley	Midway Substation - Transformer replacement	Concept	Replace existing 1X, 2X, and 3X 115/13.8-kV 20 MVA Y-D transformer with a 62.5 MVA D-Y transformer.
Local Reliability	2030	Pittsfield	Worthington Substation - New Substation	Concept	Build a new 115/13 kV station in Springfield with 2 62.5MVA 115/13-kV transformers.
Local Reliability	2030	Greenfield	New Whately-Hatfield Substation	Concept	Build a new 115/13.8kV substation in Whately-Hatfield area with two (2) 62.5 MVA 115/13.8-kV transformers.

New Hampshire Projects

Proposed, Planned, Under Construction, and In-Service projects only



Local System Plan – New Hampshire

Status of project descriptors in blue have changed from previous LSP or are newly listed

Eversource Local Area Projects - New Hampshire					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Local Reliability	Oct-21 $9.9M	Eastern	Eastport Substation - Breaker additions (Rochester)	In-Service	Add 115-kV breakers to complete ring bus configuration.
Asset Condition/ Reliability	Dec-21	Western	Emerald St. (Keene) Substation - Rebuild substation and add transformers (Keene)	In-Service	Rebuild Emerald Street (Keene) Substation equipment with two new 30 MVA transformers and associated switchgear. The existing TB3 transformer (22.4 MVA) at Keene will remain.
Local Reliability	Jul-22 $6.5M	Eastern	Eddy Substation – 115 kV Breaker addition (Manchester)	In-Service	Add a 115-kV breaker.
Asset Condition/ Reliability	Sep-22	Southern	G192 115-kV Line Conductor and ShieldWire replacement	In-Service	Replace deteriorating copper materials with new conductor and OPGW between Bridge Street substation and Power Street substation.
Asset Condition	Dec-22 $52.9M	Northern	D142 115-kV Line Rebuild and Asset Condition Project	Under Construction	Rebuild the aging 115-kV line with larger conductor.
Asset Condition	Dec-23 $51.0M	Northern	O154 115-kV Line Rebuild and Asset Condition Project	Under Construction	Rebuild the aging 115-kV line with larger conductor and OPGW.
Asset Condition	Dec-23	Central	E115 Tap 115-kV Line Rebuild and Asset Condition Project	Planned	Rebuild the aging 115-kV line with larger conductor and OPGW.
~~Local Reliability~~	~~2023~~	~~Southern~~	~~Amherst – 345 kV Breaker Addition~~	Moved to RSP	~~Install one 345 kV breaker on the high side of the step up transformer of the Amherst synchronous condenser.~~

Local System Plan – New Hampshire (continued)

Status of project descriptors in blue have changed from previous LSP or are newly listed

Eversource Local Area Projects - New Hampshire					
Need	Projected ISD Month/Year (Cost >$5M dollars)	Project Area	Project	Status	Solution
Asset Condition	2024	Northern	W179 115-kV Line Rebuild and Asset Condition Project	Planned	Rebuild the aging 115-kV line with larger conductor and OPGW.
Asset Condition/ Reliability	2024	Western	Monadnock Substation - Transformer replacements (Troy)	Proposed	Replace the existing 115/34.5-kV, 20 & 28 MVA transformers at Monadnock substation with two new 115/34.5 kV, **62.5 MVA transformers.** Add 5 breakers to have a ring bus configuration.
Asset Condition/ Reliability	2025	Northern	White Lake Substation - Transformer replacements (Tamworth)	Proposed	Replace the existing two 115/34.5-kV, 28 MVA transformers at White Lake substation with two new 115/34.5 kV, 62.5 MVA transformers. **Add two 115 kV bus tie breakers.**
Asset Condition/ Reliability	2025	Eastern	Dover (Cocheco St.) Substation - Transformer replacements (Dover)	Proposed	Replace the existing two 115/34.5-kV, 44.8 MVA transformers at Dover (Cocheco Street) Substation with two new 115/34.5 kV, 62.5 MVA transformers. Add 4 breakers to have a ring bus configuration.
Load Growth and Reliability	2028	Southern	South Milford Substation - Transformer addition (Milford)	Concept	Add a second 115/34.5 kV transformer at South Milford substation. Transformer to be a 62.5 MVA unit.

Comments

Please provide any written comments for consideration by November 19, 2022 (as defined in the ISO-NE Open Access Transmission Tariff Section II – Attachment K Appendix 1 [Attachment K – Local], section 1.4).

Dave Burnham

Director, Transmission Policy
Eversource
56 Prospect Street
Hartford, CT 06103
Phone: (860) 728-4506
email: david.burnham@eversource.com

Thank you for participating in the Eversource LSP Presentation.

Questions?

Appendix

Public Policy Requirements

- On May 1, 2020, NESCOE communicated its decision not to request that ISO-NE initiate a Public Policy Transmission Study in the current planning cycle and determined that, at this time, there are no State or Federal Public Policy Requirements "driving transmission needs relating to the New England Transmission System."
- On June 17, 2020, ISO-NE communicated that it reviewed and agreed with NESCOE's position. ISO-NE also communicated that it was not aware of any local Public Policy Requirements driving the need for transmission and thus will not be conducting a Public Policy Transmission Study.
- On July 15, 2020, Eversource communicated that it has reviewed ISO-NE's and NESCOE's responses and determined that there are no Public Policy Requirements identified in the ISO-NE Public Policy Transmission Upgrade process that are potentially driving transmission needs on Eversource's Non-PTF systems.