



# Local System Plan 2024

Transmission Owner Planning Advisory Committee

November 20, 2024

# Agenda

- ❖ LSP process overview
- ❖ Projects in each region
  - Transmission line projects
  - Substation projects
    - New substations
    - Substation expansions and reconfigurations
    - Transformer additions & replacements
  - DER group studies (Massachusetts only)

# LSP materials overview

- LSP materials include two files:
  - LSP Presentation (this file)
  - LSP Project List (spreadsheet)
  - Both files are posted in draft form to the ISO-NE website, and will be posted to the Eversource website when final
- LSP Presentation will be reviewed with the TOPAC
  - Projects are grouped by geographic location and project type (rather than in-service date)
  - Additional information provided for more complex projects
  - Changes from last year marked in blue

# Update to Eversource LSP for 2024

- 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-[2024](#) supersedes Eversource's LSP-[2023](#)

# 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:
    - Email: [PAC.Responses@eversource.com](mailto:PAC.Responses@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/residential/about/transmission-distribution/projects>
  - After following the link, scroll to the section which states “Other projects are listed on our Local System Plan, which is updated annually.” (Red below)



Connecticut



Massachusetts



New Hampshire

To ensure close collaboration with our stakeholders, we share information on upcoming projects with ISO New England's [Planning Advisory Committee](#), which is an open forum for stakeholder feedback. Most of our projects are listed on ISO New England's [Regional System Plan](#) and Asset Condition project lists. Other projects are listed on our Local System Plan ([pdf presentation](#), [excel listing](#)), which is updated annually.

# Local System Planning Process

- Local studies can result from:
  - Load growth and/or point of delivery requests from customers
  - Local area reliability assessments
  - 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)
  - Distribution system modifications (including upgrades to integrate distributed energy resources)
- 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
- The Local System Plan also includes asset condition projects on non-PTF transmission facilities

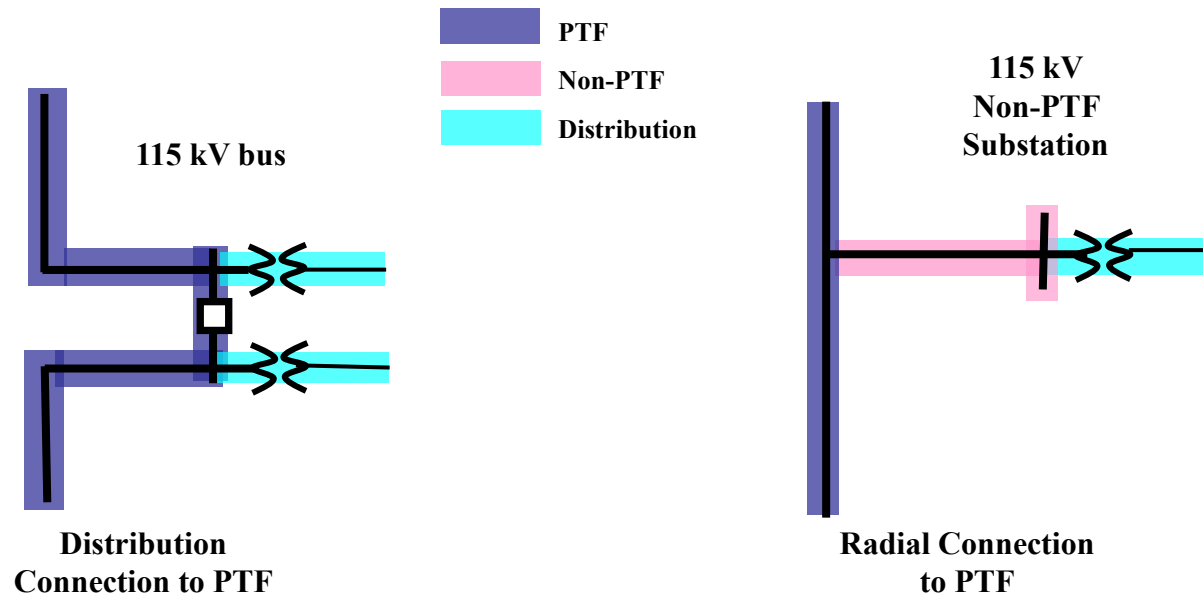


# Criteria and Assumptions

- 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 as described in the “Transmission System Design and Analysis Guideline”
- Eversource complies with NERC, NPCC, and ISO-NE planning criteria
- Eversource uses the annual ISO-NE CELT Report forecasts for the New England area peak load. The effects of non-peak loads may be analyzed if those could cause a condition of concern
  - 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 ISO-NE power flow and short-circuit models which are modified to represent the specific conditions to be analyzed.

# 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 2023 RSP:

- New Hampshire, RSP sections 5.3 and 5.4.8
- Connecticut, RSP sections 5.3, 5.4.1, 5.4.2, and 5.4.3
- Eastern Massachusetts, RSP sections 5.3, 5.4.4, 5.4.5, and 5.4.6
- Western Massachusetts, RSP sections 5.3 and 5.4.4

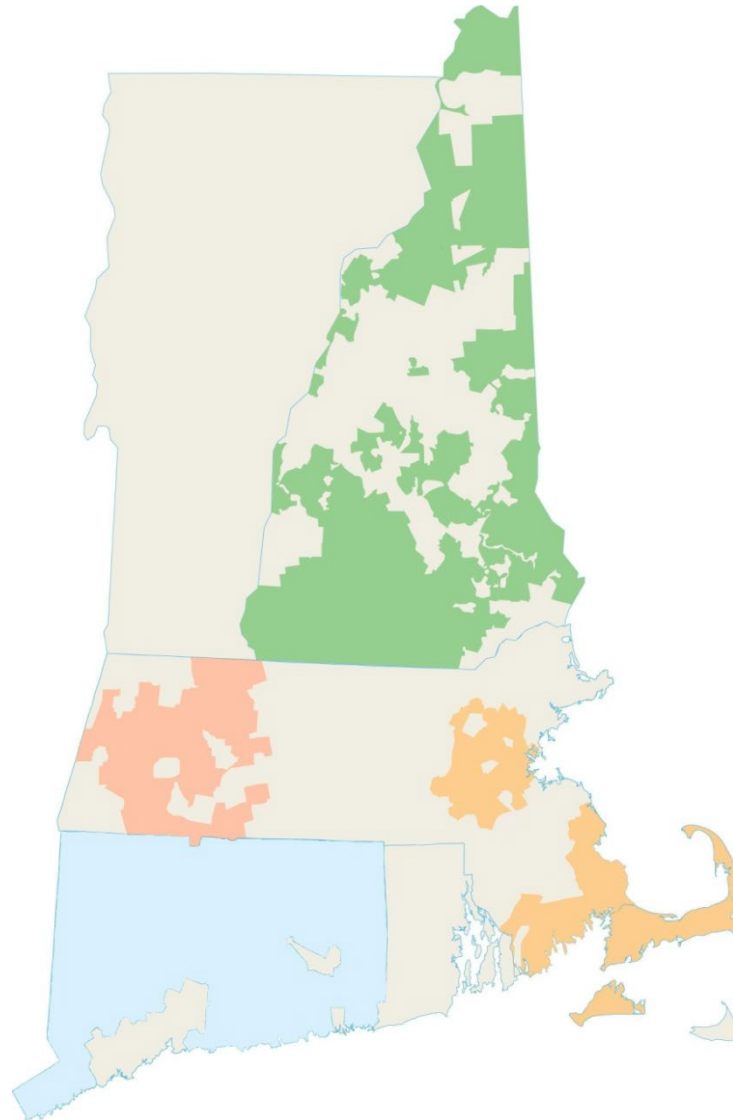
# LSP Project List

- 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 complete
  - **Proposed** – Eversource has determined that the project is an appropriate solution to the need, but a Proposed Plan Application (PPA) is not yet approved by ISO-NE
  - **Planned** - PPA has been filed and approved by ISO-NE
  - **Under Construction** - Final engineering and internal approvals completed and project is being implemented
  - **In-Service** - Project completed

# Eversource Service Territories

*Local System Plan projects are grouped into four regions:*

- *Eastern Massachusetts*
- *Western Massachusetts*
- *Connecticut*
- *New Hampshire*

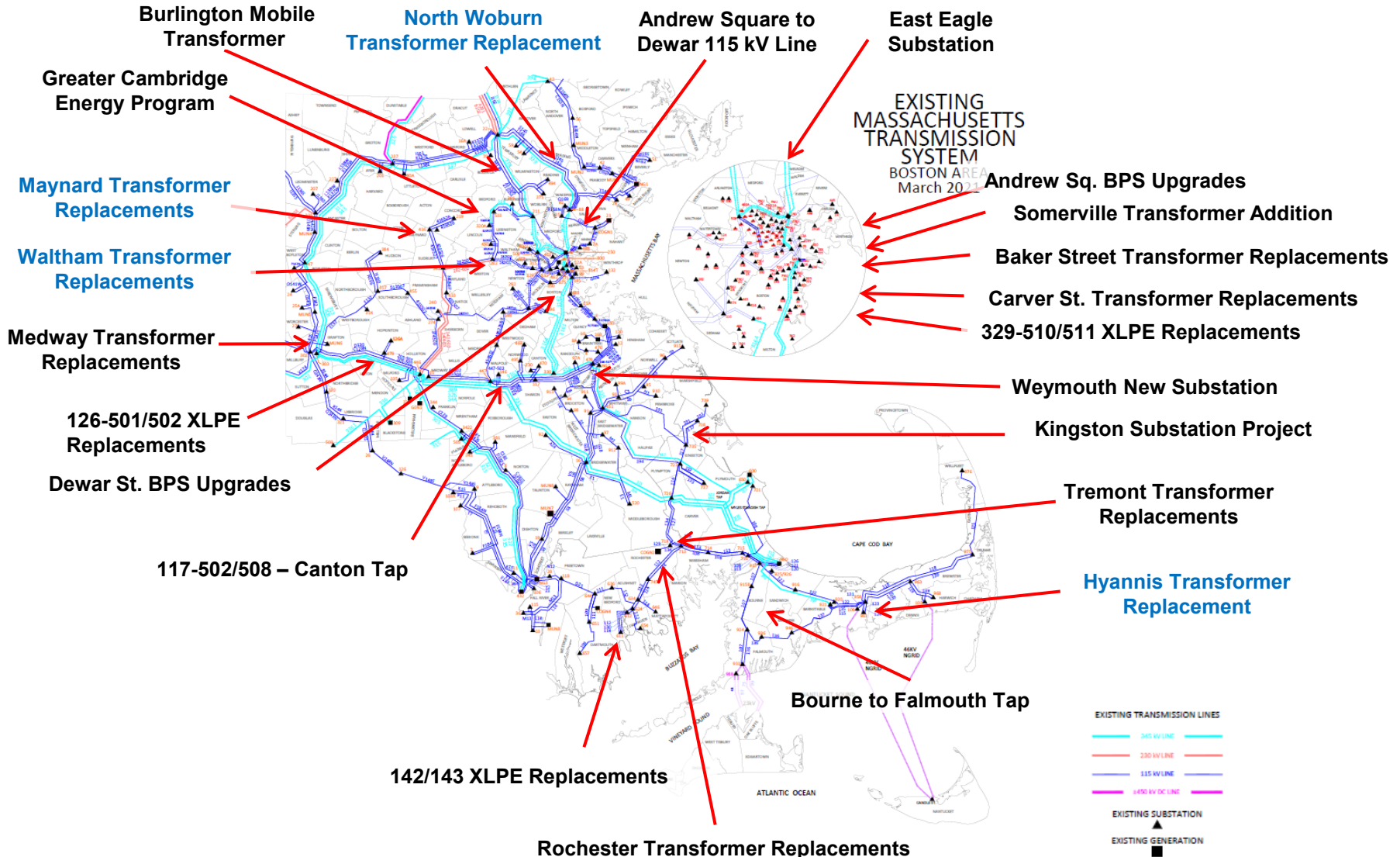


# Organization of the Local System Plan

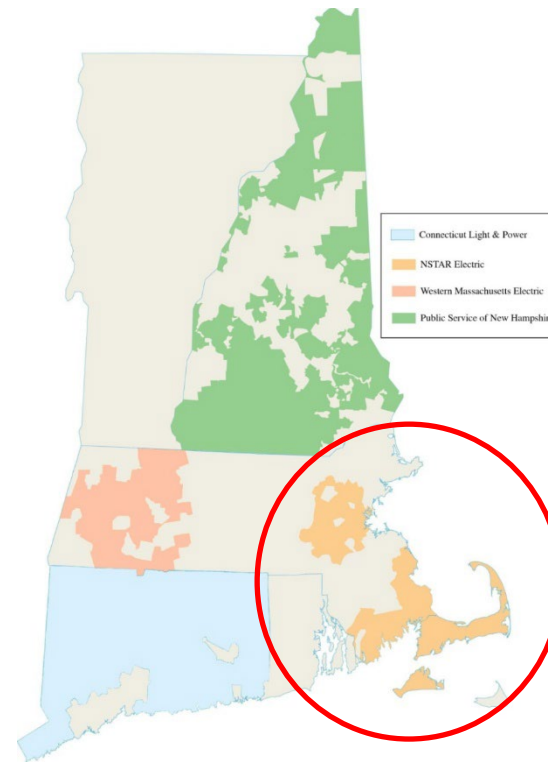
- For each region, projects are organized as follows:
  - Transmission line projects
  - Substation projects
    - New substations
    - Substation reconfiguration and/or expansion
    - Bulk distribution transformer additions or replacements (limited or no substation modifications)
  - DER Group Studies – Projects associated with MA Provisional Planning Process study groups
- New projects and projects with significant revisions are indicated
  - Presentation will focus on these projects

# Eastern Massachusetts Projects

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



\*DER Group Study projects not reflected



Eastern MA

# TRANSMISSION LINE PROJECTS



# Underground Cable Modernization Program

Replacement of PTC with XLPE addresses equipment availability concerns, environmental concerns, better accommodates future system expandability, and provides the most reliable and least risk solution over the long-term

ID	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-034	115kV Line 126-501/502 XLPE Replacement	Replace pipe-type cable (PTC) circuits between Hopkinton and Milford with solid dielectric cross-linked polyethylene (XLPE) technology	2027	Proposed	TBD	TBD	No Changes
ES-23-LSP-041	115kV Line 142/143 XLPE Replacement	Replace pipe-type cable (PTC) circuits between Acushnet and Pine St with solid dielectric cross-linked polyethylene (XLPE) technology	2028	Planned	ES-23-T01	\$198.4	No Changes
ES-23-LSP-047	115kV Line 329-510/511 XLPE Replacement	Replace pipe-type cable (PTC) circuits between Somerville and Mystic with solid dielectric cross-linked polyethylene (XLPE) technology	2029	Proposed	TBD	TBD	No Changes
ES-23-LSP-051	115kV Line 292-522/523 XLPE Replacement	Replace pipe-type cable (PTC) circuits between Baker St and Newton Highlands with solid dielectric cross-linked polyethylene (XLPE) technology	2030	Concept	TBD	TBD	No Changes
ES-23-LSP-054	115kV Line 250-516/517 XLPE Replacement	Replace pipe-type cable (PTC) circuits between Mystic and Seafood Way with solid dielectric cross-linked polyethylene (XLPE) technology	2032	Concept	TBD	TBD	Yes



# Other Transmission Line Projects

ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-003	Asset Condition/ Local Reliability	115kV Line 117-502 and 117-508 structure replacements and OPGW - Canton Tap	Replace existing structures due to reliability concerns and asset condition	Jul-2024	In-Service	N/A	\$11.3	Yes
ES-23-LSP-007	Local Reliability	Andrew Square Sta #106 to Dewar Sta #483, new 115kV Line	Install new 115kV transmission line between Andrew Square and Dewar stations to provide alternative source to either station under N-1-1 contingencies	Aug-2025	Under Construction	ES-19-T04	\$96.3	Yes
ES-23-LSP-043	Local Reliability	New Bourne to Falmouth Tap 115kV Line	Install a new 115-kV transmission line between Bourne and Falmouth Tap substation to mitigate Consequential Load Loss violations under N-1-1 conditions.	2030	Proposed	TBD	TBD	Yes
ES-23-LSP-048	Local Reliability	Newton Highlands #292 Substation Third Transmission Source	Add a third 115 kV line to Newton Highlands 292 substation	2030	Concept	TBD	TBD	No



# Other Transmission Line Projects

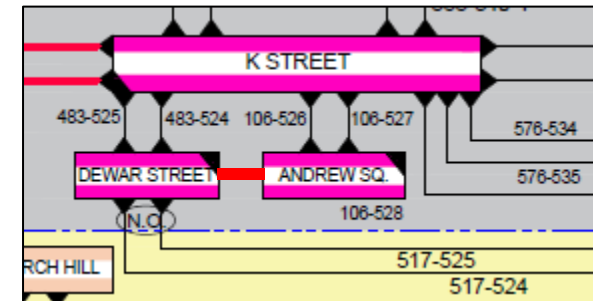
ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-24-LSP-148	Local Reliability	K St Substation #385 - Expansion	Add a new 345 kV line from Kingston St Substation to K Street and a 345 kV PAR at K Street Substation	2032	Concept	TBD	TBD	New
ES-24-LSP-147	Local Reliability	Maynard #416 Substation - Add a third 115 kV source	Add a third 115 kV line to Maynard 416 substation	2033	Concept	TBD	TBD	New



# Andrew Square to Dewar Street 115kV Line

Project updates in blue

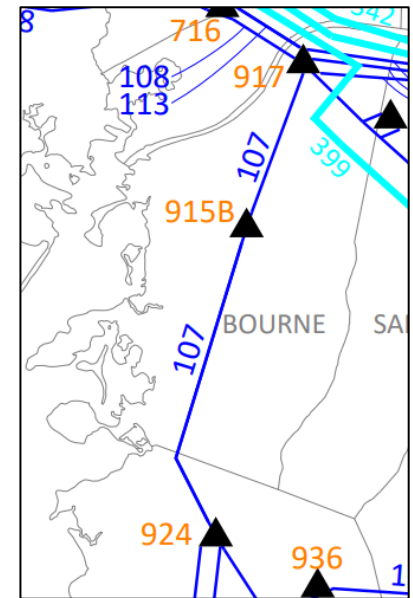
<b>ID</b>	ES-23-LSP-007
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	Potential loss of service to Andrew Square and/or Dewar Street stations for certain N-1-1 contingencies, which violates the Eversource local planning criteria SYS PLAN 015
<b>Solution Description</b>	Install new 115-kV transmission line between Andrew Square and Dewar Street stations in Boston to provide alternative source to either station under N-1-1 contingencies.
<b>Status</b>	Under Construction
<b>Cost</b>	\$96.3 M
<b>Projected In-Service</b>	August 2025



# New Bourne to Falmouth Tap 115-kV Line

Project updates in blue

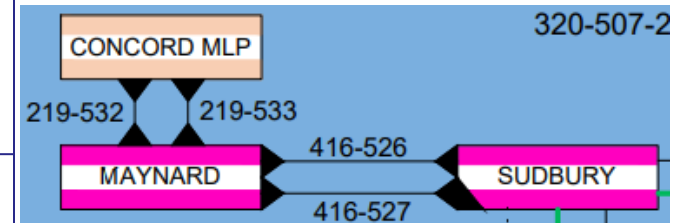
<b>ID</b>	ES-23-LSP-043
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	Multiple Transmission and Distribution needs for this project include: (1) N-1 transmission contingency outages the entire Falmouth Tap Substation resulting in a consequential loss of load that exceeds Eversource local planning criteria Transmission System Design and Analysis Guideline (TSDAG); (2) N-1-1 transmission contingencies will leave multiple stations without supply resulting in a consequential load loss that exceeds Eversource local planning criteria TSDAG; (3) N-1 transmission contingencies at Falmouth resulting in outages of multiple distribution transformers which violates the Eversource local planning criteria Distribution System Planning Guide (DSPG 2020); (4) under normal all-lines-in-service conditions, projected load at Hatchville and Falmouth Bulk will exceed capacity limits set in Eversource local planning criteria SYS PLAN 010.
<b>Solution Description</b>	Install a new 115-kV transmission line between Bourne and Falmouth Tap substation to mitigate Consequential Load Loss violations under N-1-1 conditions.
<b>Status</b>	Proposed
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2030

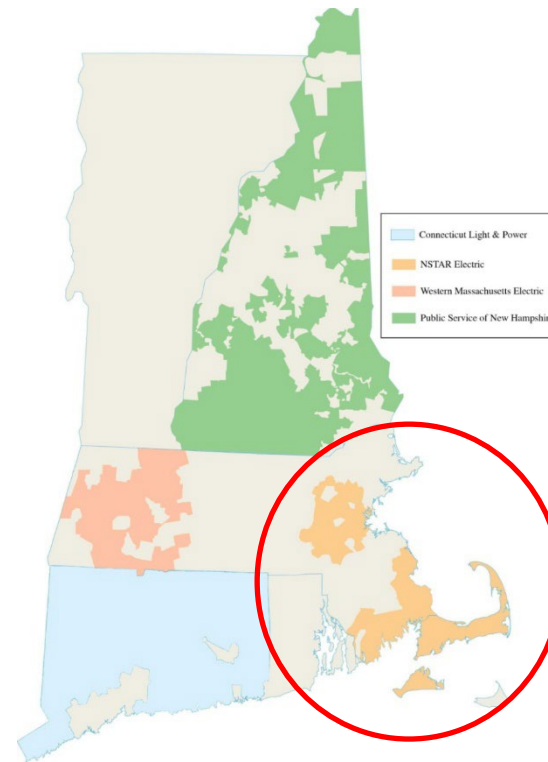


# Maynard #416 Substation – Add a Third 115 kV Source

New addition

<b>ID</b>	ES-24-LSP-147
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	N-1-1 loss of load violates the consequential load loss criteria in the Transmission System Design and Analysis Guideline (TSDAG).
<b>Solution Description</b>	Add a third 115 kV line to Maynard 416 substation
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2033





Eastern MA

# SUBSTATION PROJECTS: NEW SUBSTATIONS

# New Substations

ID	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-033	Weymouth Substation	Build a new 115 kV three-breaker ring substation Broad Street #624 in Weymouth, MA that will bisect line 478-502. Install a new radial 115 kV, 3.7-mile cable from the new station to provide a new supply to Hingham Municipal.	2028	Planned	ES-23-T53, ES-23-X02	N/A	Yes
ES-23-LSP-038	Hyde Park Substation	Build a new 115/13.8kV Substation with three 37/50/62.5 MVA transformers.	2029	Concept	TBD	TBD	Yes
ES-23-LSP-045	North Burlington Substation	Build a new 115/14kV station with 115 kV breaker-and-a-half configuration with two 62.5 MVA 115/14kV transformers.	2029	Concept	TBD	TBD	Yes
ES-23-LSP-046	Greater Cambridge Energy Program	Install new substation with three (3) 90 MVA 115/14-kV transformers which will relieve East Cambridge #875, Putnam #831 and Prospect St #819 (distribution-only substation). New substation will be supplied via 329-510/511 lines from Brighton which will be replaced with XLPE cables and 329/510-511 lines from Somerville/Mystic, which will be replaced with XLPE as part of ES-23-LSP-047. The existing 831-538 and 875-539 lines will also interconnect with the new substation. Relocate 875-539 terminal to new substation.	2031*	Proposed	TBD	\$1,029.3	Yes
ES-23-LSP-053	Saxonville/Natick Substation	Permanent 115/14kV Station either at Saxonville or Mill Street, Natick with two 65 MVA transformers.	2031	Concept	TBD	TBD	Yes

\* Initial energization and distribution circuit cutovers will begin in Q3 2025





# New Substations - Continued

ID	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-049	Harwich/ Orleans Substation	Install new distribution bulk substation with two (2) 115/23kV 75 MVA transformers. The proposed location is TBD and will most likely be installed at Harwich Tap Switching Station where the 118, 119, and 139 lines tap to Harwich Sub. Previously listed on the LSP as Dennis/Brewster.	2032	Concept	TBD	TBD	Yes
ES-23-LSP-058	New Charlestown / Somerville Substation	A new bulk distribution substation to supply the Somerville/Charlestown areas of Metro Boston	2032	Concept	TBD	TBD	Yes
ES-23-LSP-060	New South End Substation	A new bulk distribution substation in South End/Andrew Square/Roxbury neighborhoods of Metro Boston	2032	Concept	TBD	TBD	Yes
ES-24-LSP-149	New Charlestown / Somerville Substation and Associated Transmission Lines	Construct new Charlestown / Somerville SS connecting to lines 324 and 372, and add 345 kV lines to New Charlestown / Somerville Substation	2032	Concept	TBD	TBD	New
ES-23-LSP-061	Future North Acton Substation	Install new 115/14kV distribution bulk substation to supply Acton and Maynard.	2033	Concept	TBD	TBD	Yes



# New Substations - Continued

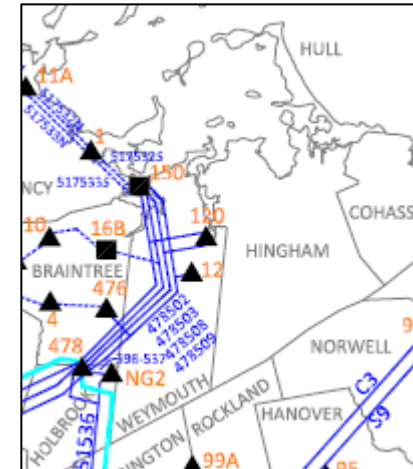
ID	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-056	New Metro Boston Network Station	A new downtown Boston area <a href="#">network</a> substation to supply the secondary network systems	2034	Concept	TBD	TBD	Yes
ES-23-LSP-057	New East Allston / Fenway/Brookline Substation	A new bulk distribution substation to supply the Allston / Fenway / Brookline areas of Metro Boston	2034	Concept	TBD	TBD	No Changes
ES-23-LSP-059	New Waltham Substation	A new bulk distribution substation in Waltham to relieve the existing <a href="#">Waltham Substation 282</a> and <a href="#">Trapelo Rd Substation 450</a>	2034	Concept	TBD	TBD	Yes



# Weymouth Substation

Project updates in blue

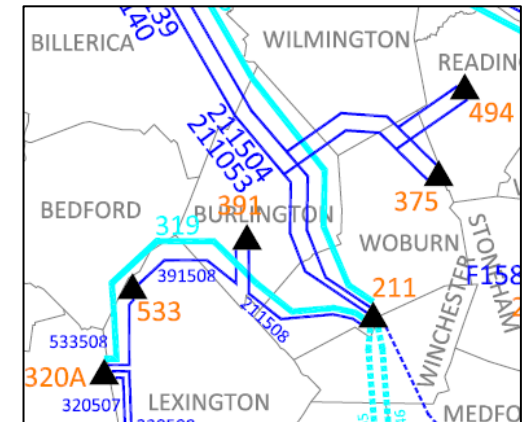
ID	ES-23-LSP-033
Need Category	Local Reliability
Need Description	Provide third transmission supply at request of Hingham Municipal
Solution Description	Build a new 115 kV three-breaker ring substation Broad Street #624 in Weymouth, MA that will bisect line 478-502. Install a new radial 115 kV, 3.7-mile cable from the new station to provide a new supply to Hingham Municipal.
Status	Planned, ES-23-T53 & ES-23-X02
Cost	TBD
Projected In-Service	2028



# North Burlington Substation

Project updates in blue

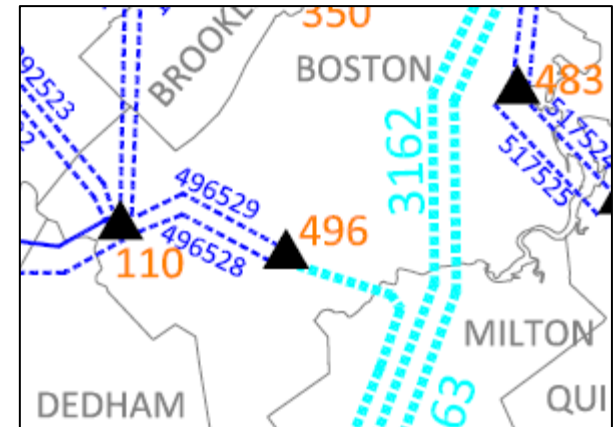
ID	ES-23-LSP-045
Need Category	Local Reliability
Need Description	The Transmission and Distribution needs include: (1) N-1-1 consequential load loss of the Burlington-Woburn load pocket that exceeds the Eversource local planning criteria in Transmission System Design and Analysis Guideline. The affected substations involve NGRID's Billerica and Pinehurst substations, Eversource's North Woburn station, and the Town of Reading's station. (2) The capacity deficiency at the Burlington Station 391 exceeds the capacity limits set in Eversource local planning criteria SYS PLAN 010.
Solution Description	Build a new 115/14 kV station with 115 kV breaker-and-a-half configuration with two 62.5 MVA 115/14 kV transformers. Location TBD
Status	Concept
Cost	TBD
Projected In-Service	2029



# Hyde Park Substation

Project updates in blue

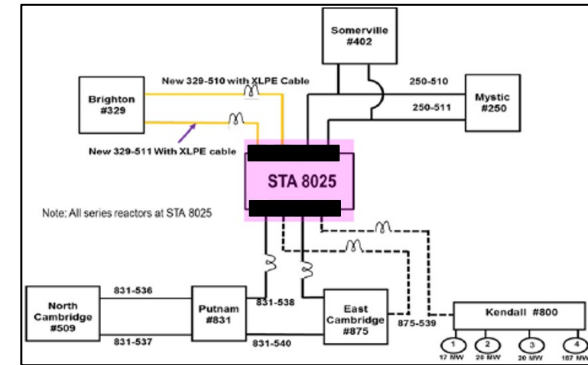
ID	ES-23-LSP-038
Need Category	Local Reliability
Need Description	Several bulk distribution substations around the Hyde Park MA and Dorchester MA areas exceed or nearly exceed firm capacity limits. These stations include, Hyde Park Station #496, Andrew Square Station #106, Baker St. Station #110, Colburn Station #350, and Dewar St. Station #483.
Solution Description	Build a new 115/13.8kV Substation with three 37/50/62.5 MVA transformers.
Status	Concept
Cost	TBD
Projected In-Service	2029



# Greater Cambridge Energy Program

Project updates in blue

ID	ES-23-LSP-046
Need Category	Local Reliability
Need Description	The Transmission and Distribution needs include: (1) N-1 and N-1-1 transmission line overloads; (2) Complete losses of load at Putnam and/or East Cambridge under N-1-1 conditions that exceed Eversource local planning criteria Transmission System Design and Analysis Guideline; (3) Rapid load growth exceed or nearly exceed the capacity of E Cambridge and Putnam substations; N-1 distribution transformer overload at East Cambridge.
Solution Description	Install new substation with three 90 MVA 115/14-kV transformers which will relieve East Cambridge #875, Putnam #831 and Prospect St #819 (distribution-only substation). New substation will be supplied via 329-510/511 lines from Brighton which will be replaced with XLPE cables and 329/510-511 lines from Somerville/Mystic, which will be replaced with XLPE as part of a separate project. The existing 831-538 and 875-539 lines will also interconnect with the new substation. Relocate 875-539 terminal to new substation.
Status	Proposed
Cost	\$1,029.3
Projected In-Service	2031*

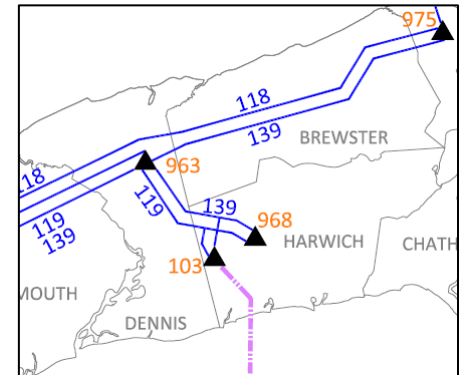


\* Initial energization and distribution circuit cutovers will begin in Q3 2025

# Harwich/Orleans Substation

Project updates in blue

<b>ID</b>	ES-23-LSP-049
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	A need was identified for distribution substation capacity and reliability improvement in the lower-Cape Area between Harwich Substation #968 and Orleans Substation #975. Issues include violations of SYS PLAN 010 and the DPSG: A transformer bank exceeding 75% of rating N-0 (all facilities in) (2 violations), single contingency outage of a substation transformer exceeding station firm capacity (4 violations), single contingency outage of a substation transformer resulting in a transformer exceeding LTE rating (6 violations), single contingency outage of a distribution supply line resulting in an element exceeding LTE rating (9 violations), post contingency volage violations below ANSI C84 minimum (multiple violations), distribution circuit reliability in “penalty region” of annual SQI (Service Quality Index) filing to Mass DPU.
<b>Solution Description</b>	Install new distribution bulk substation with two (2) 115/23kV 75 MVA transformers. The proposed location is TBD and will most likely be installed at Harwich Tap Switching Station where the 118, 119, and 139 lines tap to Harwich Sub. Previously listed on the LSP as Dennis/Brewster.
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2032



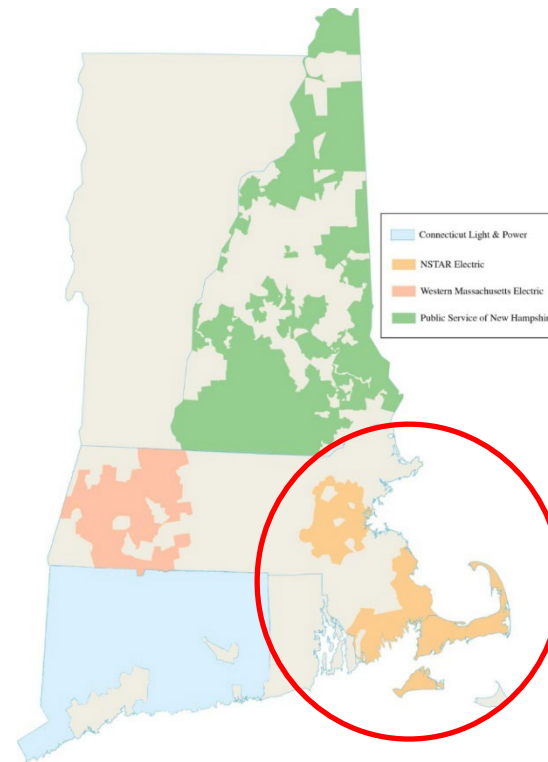
# Saxonville/Natick Substation

Project name updated

<b>ID</b>	ES-23-LSP-053
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	Retire and remove temporary mobile substation installations at Holliston Station 130 and Saxonville Station 278
<b>Solution Description</b>	Permanent 115/14kV Station either at Saxonville or Mill Street, Natick with two 65 MVA transformers.
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2031







Eastern MA

# SUBSTATION PROJECTS: STATION EXPANSIONS & RECONFIGURATIONS

# Station Expansion & Reconfigurations

ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-002	Asset Condition/Local Reliability	Kingston Substation #735	Station rebuild and redesign. This project listing includes the non-PTF and distribution components of ACL 27.	Jun-2024	In-Service	ES-23-T02, ES-23-T03	\$33.4	Yes
ES-23-LSP-008	Asset Condition/Local Reliability	Andrew Square STA #106	Build new control house and upgrade substation to Bulk Power Station standards	Mar-2025	Under Construction	ES-19-X01	\$26.7	Yes
ES-23-LSP-009	Asset Condition/Local Reliability	Dewar St. Sta. #483	Build new control house and upgrade substation to Bulk Power Station standards	2026	Under Construction	ES-19-X02	\$24.8	Yes
ES-23-LSP-029	Local Reliability	Maynard Station #416 - Transformer Replacement	Replace the 115/13.8kV 50 MVA 110A transformer with a 62.5 MVA transformer. Replace the 115/13.8kV 50 MVA 110B transformer with a 62.5 MVA transformer. Replace existing 115kV bus tie circuit switchgear with a circuit breaker, add additional 115kV circuit breaker to establish a 115kV ring bus.	2028	Proposed	TBD	TBD	Yes



# Station Expansion & Reconfigurations

## - Continued

ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-032	Local Reliability	Hyde Park #496 BESS	Interconnect a 15 MW / 20 MWhr Battery Storage System as a non-wires capacity deferral on the 24kV and 13.8kV sides of Hyde Park Substation #496	2028	Concept	TBD	N/A	Yes
ES-23-LSP-031	Local Reliability	Industrial Park #636 Battery Storage / STATCOM	Interconnect a 5 MW / 10 MWhr BESS with a 20 MVAR STATCOM for power quality improvement for customers out of Industrial Park Substation #636. The interconnection will be made the Thapelo 13.2kV side of the substation.	2029	Concept	TBD	N/A	Yes
ES-23-LSP-039	Local Reliability	Holbrook #478 - Ring Bus Upgrade	Add two breakers at the Holbrook 345kV station to close the ring bus	2030	Concept	TBD	TBD	Yes
ES-23-LSP-040	Local Reliability	Alewife Substation #828 Expansion	Install a 4th 115/13.8,kV 37/50/62.5 MVA transformer	2030	Concept	TBD	TBD	Yes



# Station Expansion & Reconfigurations

## - Continued

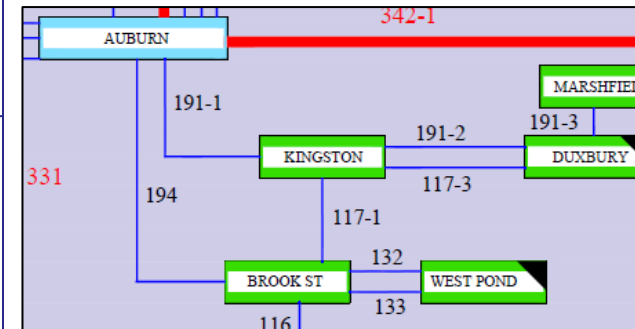
ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-044	Local Reliability	Falmouth Tap Switching Station Upgrade	Upgrade Falmouth Tap 115kV Switching Station from a 1-breaker series bus arrangement to a 115kV breaker and a half scheme. <a href="#">Install a new 115/23kV 45/50/75 MVA bulk transformer.</a>	2030	Concept	TBD	N/A	Yes
ES-23-LSP-050	Local Reliability	Electric Ave Substation #315 Expansion	Install a 4th <a href="#">37/50/62.5 MVA, 115k/13.8kV</a> transformer	2030	Concept	TBD	TBD	Yes
ES-23-LSP-055	Local Reliability	Seafood Way Substation #99 Expansion	Install a 4th 62.5 MVA transformer	2033	Concept	TBD	TBD	No Changes



# Kingston #735

Project updates in blue

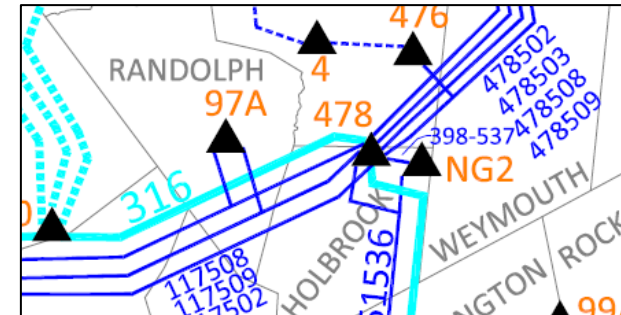
<b>ID</b>	ES-23-LSP-002
<b>Need Category</b>	Local Reliability/Asset Condition
<b>Need Description</b>	The project needs include: (1) The existing equipment at Kingston Substation has reached the end of its useful life and exhibited issues such as age-related degradation, obsolete parts, and corrosion; (2) N-1 transmission contingency outages five distribution transformers which violates the Eversource local planning criteria Distribution System Planning Guide (DSPG).
<b>Solution Description</b>	Station rebuild and redesign. This project listing includes the non-PTF and distribution components of ACL 27.
<b>Status</b>	In-Service
<b>Cost</b>	\$33.4 M (non-PTF only. PTF components on ACL)
<b>Projected In-Service</b>	June 2024

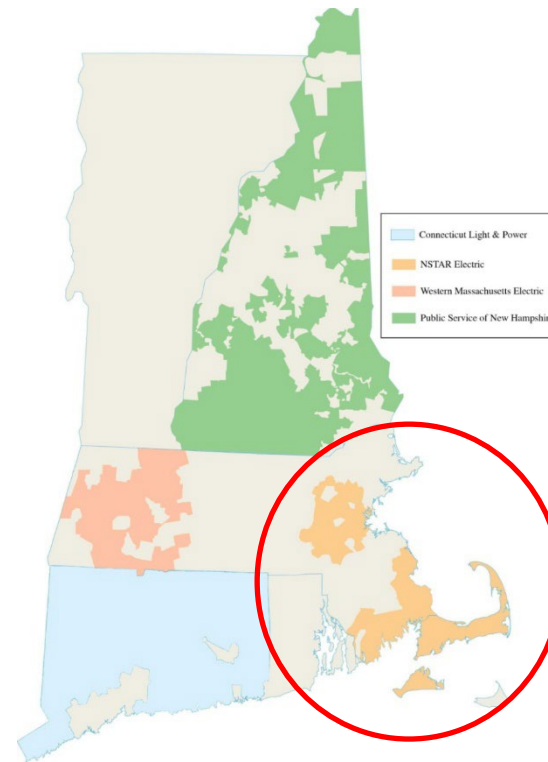


# Holbrook #478 - Ring Bus Upgrade

Project updates in blue

ID	ES-23-LSP-039
Need Category	Local Reliability
Need Description	345 kV N-1 contingencies or maintenance conditions at Holbrook Station #478 result in line-end open situations of single or multiple 345 kV lines and leave Stoughton and/or Auburn Street substations with a single 345 kV supply.
Solution Description	Add two breakers at the Holbrook 345 kV station to close the ring bus
Status	Concept
Cost	TBD
Projected In-Service	2030





Eastern MA

# SUBSTATION PROJECTS: TRANSFORMER ADDITIONS & REPLACEMENTS

# Transformer Additions & Replacements

ID	Station	Need Category	Old Transformer	New Transformer	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-006	Medway (#65) Substation	Local Reliability	115/13.8 kV 40 MVA, 110B	62.5 MVA	Jul-2024	In-Service	ES-22-T20	N/A	Yes
ES-23-LSP-001	Burlington (#391) Substation	Local Reliability	New addition	115/14kV 50 MVA mobile transformer	Nov-2024	Under Construction	ES-22-T16	N/A	Yes
ES-24-LSP-151	North Woburn (#375) Substation	Asset Condition/ Local Reliability	115/13.8 kV 50 MVA, 110B	50 MVA	Dec-2024	Under Construction	ES-24-T37	N/A	New
ES-23-LSP-018	Baker Street (#110) Substation	Asset Condition/ Local Reliability	115/23 kV 75 MVA, 110A	90 MVA	Mar-2025	Proposed	TBD	N/A	Yes
ES-23-LSP-004	Somerville (#402) Substation	Local Reliability	New addition	115/14kV 62.5 MVA	Jun-2025	Under Construction	TBD	N/A	Yes
ES-23-LSP-011	East Eagle (#131) Substation	Local Reliability	New additions	115/13.8kV 62.5 MVA, Two units	Dec-2025	Under Construction	ES-16-T13	N/A	No Changes

Primarily Distribution, the Transmission cost is less than \$5M





# Transformer Additions & Replacements - Continued

ID	Station	Need Category	Old Transformer	New Transformer	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-005	Medway Substation (#65) Substation	Local Reliability	115/13.8 kV 40 MVA, 110A	62.5 MVA	2026	Under Construction	ES-22-T19	N/A	Yes
ES-23-LSP-019	Mystic (#250) Substation	Local Reliability	115/24 kV 60 MVA, 110C	115/13.8 kV 62.5 MVA	2026	Concept	TBD	N/A	Yes
ES-23-LSP-020	Rochester (#745) Substation	Local Reliability	115/13.2 kV 12.5 MVA, #1	62.5 MVA	2026	Planned	ES-21-T76	N/A	Yes
ES-23-LSP-035	Maynard Station (#416) Substation	Local Reliability	115/13.8 kV 50 MVA, 110B	62.5 MVA	2026	Cancelled	TBD	N/A	Yes
ES-24-LSP-144	Hyannis Junction (#961) Substation	Asset Condition/ Local Reliability	115/24 kV 50 MVA, 2X	50 MVA	2026	Proposed	TBD	N/A	New
ES-23-LSP-010	Carver St. (#71) Substation	Local Reliability	115/13.8 kV 85 MVA, 110A & 110B	90 MVA	2027	Under Construction	TBD	\$9.3	Yes
ES-23-LSP-037	Hawkins Street (#2) Substation	Asset Condition/ Local Reliability	115/13.8 kV 62.5 MVA, 110B	90 MVA	2027	Cancelled / Combined with ES-23-LSP-036	TBD	N/A	Yes

Primarily Distribution, the Transmission cost is less than \$5M



# Transformer Additions & Replacements - Continued

ID	Station	Need Category	Old Transformer	New Transformer	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-030	Waltham (#282) Substation	Asset Condition/ Local Reliability	115/13.8 kV 90 MVA, 110B	90 MVA	2027	Under Construction	TBD	N/A	Yes
ES-23-LSP-025	Tremont (#713) Substation	Local Reliability	115/23 kV 20 MVA, #1	75 MVA	2028	Planned	ES-21-T73	N/A	Yes
ES-23-LSP-036	Hawkins Street (#2) Substation	Asset Condition/ Local Reliability	115/13.8 kV 62.5 MVA, 110A & 110B	90 MVA	2030	Concept	TBD	N/A	Yes

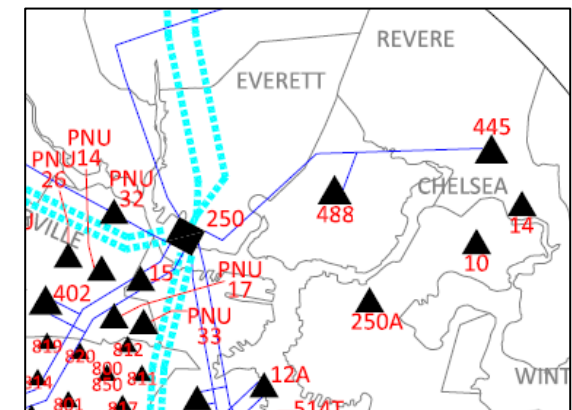
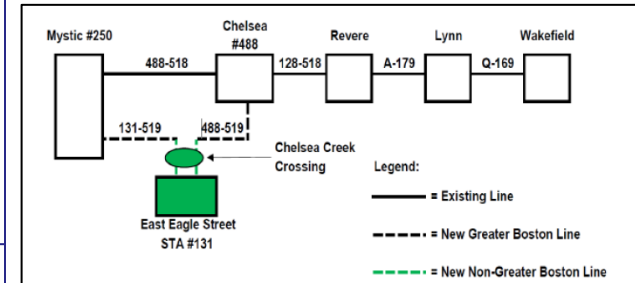
Primarily Distribution, the Transmission cost is less than \$5M

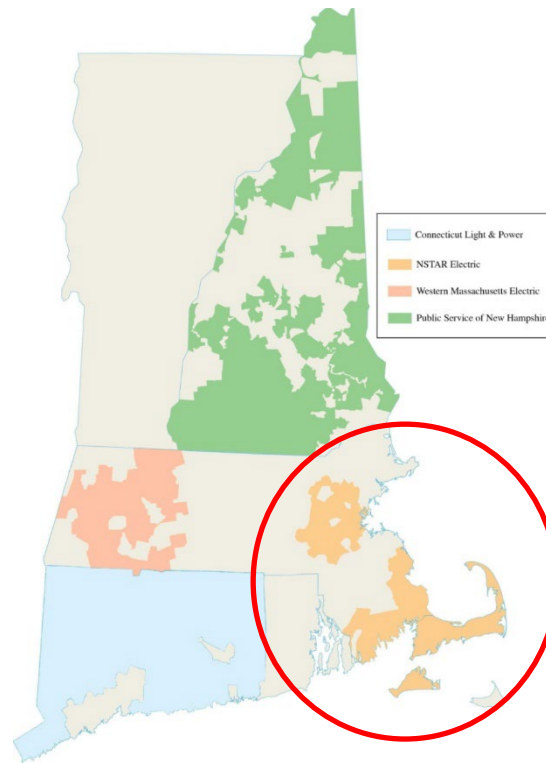


# East Eagle Substation #131

No updates for 2024

<b>ID</b>	ES-23-LSP-011
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	Relieves Chelsea Sta #488 under N-1 transformer outage conditions the load could exceed the station's firm capacity. In addition, local area load continues to grow, including redevelopment of Suffolk Downs.
<b>Solution Description</b>	Install two 115/13.8-kV 62.5 MVA transformers at new substation. PTF components of substation are listed under RSP 1745. Substation will be served by bifurcating the Mystic-Chelsea 115 kV that was listed as RSP 1354 and placed in service 10/2020.
<b>Status</b>	Under Construction
<b>Cost</b>	N/A (Distribution-only. Transmission components listed on RSP)
<b>Projected In-Service</b>	Dec-2025





Eastern MA

# DER GROUP STUDIES

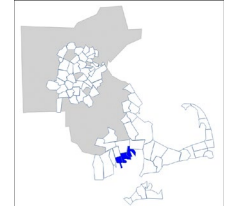
# Massachusetts DER Group Studies

- Eversource is studying Distributed Energy Resources in group studies
  - Additional information: <https://www.mass.gov/guides/provisional-system-planning-program-guide>
- Eversource has filed Capital Investment Projects (“CIP”) for six DER Group Studies with the MA DPU
  - Five (5) Group Studies have been approved to date (DPU 22-47, DPU 22-52, DPU 22-53, DPU 22-54 & DPU 22-55)
  - One (1) is awaiting approval (DPU 22-51)
- Transmission upgrades associated with the DER group studies are listed on the following slides
- A seventh group study at New Bedford’s Industrial Park substation does not have a CIP filing with the Massachusetts DPU, but is expected to require a transmission upgrade



# Marion-Fairhaven Group 2022

- Arsene St, Crystal Spring, Rochester and Wing Lane stations
  - [MA DPU 22-47](#)
  - <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14819617>



ID	Solution	Est. ISD	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-015	Replace the Wing Lane transformer #1 and #2 with new 37/50/62.5 MVA, 115/13.2kV transformers	Oct-2025	Planned	ES-21-T78, ES-21-T79	N/A	Yes
ES-23-LSP-012	Extend the 115kV 112 Line from Crystal Spring Junction to Crystal Spring station for the transformer addition at Crystal Spring	2026	Planned	ES-21-T70	\$18.9	Yes
ES-23-LSP-013	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.	2026	Planned	ES-21-T71, ES-21-T72	\$14.0	Yes
ES-23-LSP-014	Replace the Rochester transformer #2 with a new 37/50/62.5 MVA, 115/13.2kV transformer	2026	Planned	ES-21-T77	\$12.0	Yes

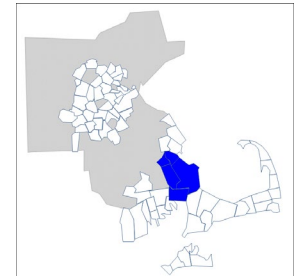


# Plymouth Group 2022

- Tremont, Wareham, West Pond, Valley, Manomet, Kingston and Brook St stations

– [MA DPU 22-54](#)

<https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14895146>



ID	Solution	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-021	Replace Wareham transformer #1 with a 45/60/75 MVA, 115/23 kV transformer.	2028	Planned	ES-21-T63	N/A	Yes
ES-23-LSP-022	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.	2028	Planned	ES-21-T66, ES-21-T67, ES-21-T68, ES-21-T69	\$25.0	Yes
ES-23-LSP-023	Reconductor the 115 kV 132 Line between Brook Street and West Pond with 795 ACSS	2028	Planned	ES-21-T65	\$23.0	Yes
ES-23-LSP-024	Replace the Tremont transformer #2 with a new 45/60/75 MVA, 115/23kV transformers. Install a new 45/60/75 MVA, 115/23kV transformer #3	2028	Planned	ES-21-T74, ES-21-T75	N/A	Yes



# Freetown Group 2022

- Assonet station

- [MA DPU 22-51](#)

- <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14895134>

ID	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-026	Build a new 115kV line from Bell Rock to supply new Assonet four (4) breaker ring configuration for DER Group Study.	2029	Planned	ES-21-T52	\$82.0	Yes
ES-23-LSP-027	Build a new 115/13.2kV Assonet station with four-breaker ring configuration. Install two new 37/50/62.5 MVA, 115/13.2kV transformers	2029	Planned	ES-21-T54, ES-23-T59	\$38.0	Yes
ES-23-LSP-028	Second 115kV line to the new 115kV Assonet Substation	2029	Planned	ES-23-T58	TBD	Yes
ES-23-LSP-042	Upgrade the Industrial Park station to a six-breaker ring bus configuration. Replace transformers #1 and #2 with new 37/50/62.5 MVA, 115/13.2kV transformers and install a new 37/50/62.5 MVA transformer #3	2032	Planned	ES-21-T58 ES-21-T59 ES-21-T60 ES-21-T61	TBD	Yes





# DER Group Study - Other

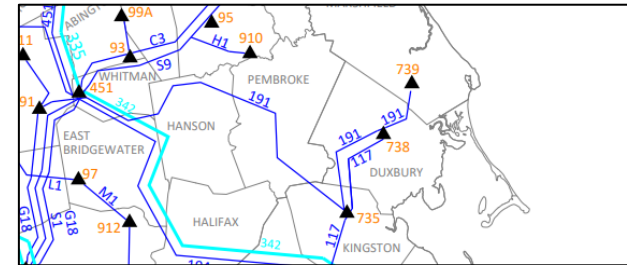
ID	Solution	ISD, Projected	Project Status	Transmission Cost, Estimated (\$M)	PPA ID	Changes From Last Year
ES-23-LSP-017	<p><b><u>Common Upgrade for Multiple Groups</u></b></p> <p>Reconductor the 115kV 191 Line between Auburn Street and Kingston Street with 1590 ACSS and address terminal thermal limitations.</p>	Dec-2025	Under Construction	\$27.0	ES-21-T51-Rev1	Yes
ES-23-LSP-016	<p><b><u>Dartmouth-Westport Group</u></b></p> <p>Replace the Fisher Road transformer #1 and #2 with new 37/50/62.5 MVA, 115/13.2kV transformers</p>	2028	Planned	\$13.0	ES-21-T80, ES-21-T81	Yes

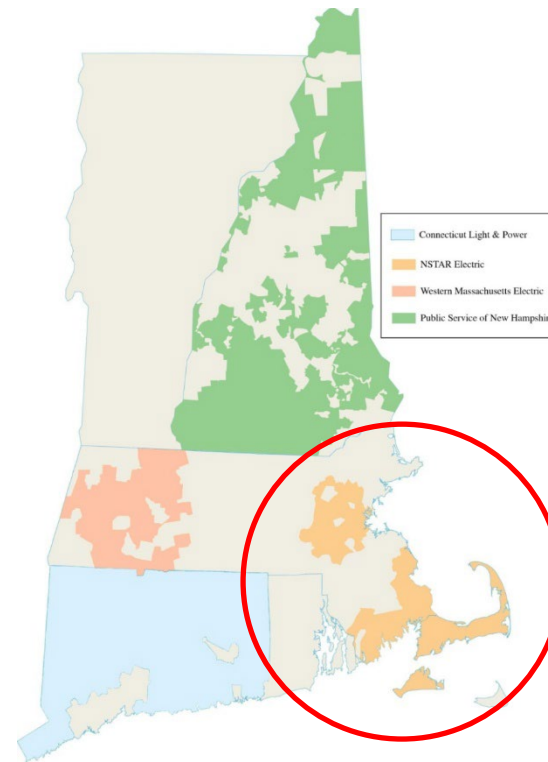


# Common Upgrade for Multiple Groups: 191 Line

Project updates in blue

ID	ES-23-LSP-017
Need Category	DER Group Study
Need Description	Eversource Affected System Operator (ASO) study completed in August 2021 identified thermal overload of the 191 line under N-1-1 conditions, as a result of the interconnections of the DER projects in the SEMA and Cape region.
Solution Description	Reconductor the 115 kV 191 Line between Auburn Street and Kingston with 1590 ACSS and address terminal thermal limitations.
Status	Under Construction
Cost	\$27M
Projected In-Service	Dec-2025





Eastern MA

# ELECTRIC SECTOR MODERNIZATION PROJECTS (ESMP)

# Massachusetts 2035 to 2050

## Electric Sector Modernization Plan<sup>1</sup> Projection

### EMA – North

- 2 bulk distribution substations are proposed on the metro west area
  - **Future West Framingham Substation:** This project solution is proposing to increase bulk distribution substation capacity in the Framingham and Ashland areas where the existing substation is expected to be at capacity in the 20-year planning horizon. Proposed solution is to establish a new 115/13.8kV substation.
  - **Future Newton Substation:** This project solution is proposing to increase bulk distribution substation capacity in the Newton, Waltham, and Needham areas where the existing substations are expected to be at capacity in the 20-year planning horizon. Proposed solution is to establish a new 115/13.8kV substation.
- 2 bulk distribution substations are proposed in the metro area
  - **Future South Boston Substation:** This project solution is to increase bulk distribution substation capacity in the South Boston neighborhood of the City of Boston. Proposed solution is to establish a new 115/13.8kV substation.
  - **Future Somerville Supply Initiatives:** This project solution is proposing to increase bulk distribution substation capacity in the City of Somerville where the existing substations are expected to be at capacity in the 20-year planning horizon. Proposed solution is to establish a new 115/13.8kV substation.

<sup>1</sup>[Eversource Electric Sector Modernization Plan download \(mass.gov\)](https://www.mass.gov/info-details/eversource-electric-sector-modernization-plan-download)

# DER Groups, Pending DPU Approval

## Electric Sector Modernization Plan<sup>1</sup> Projection

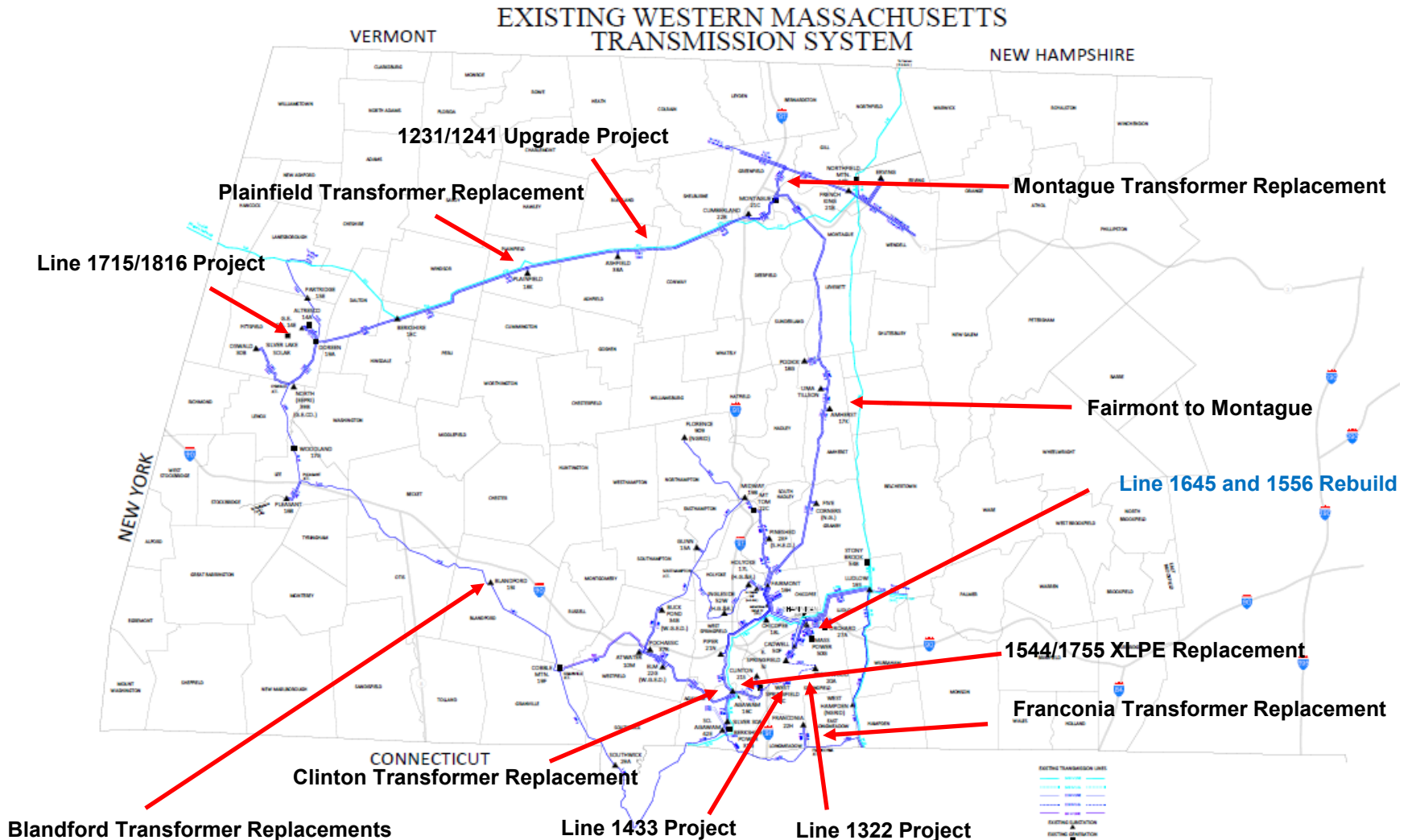
Total of three (3) Distribution Study Groups identified in Eastern MA

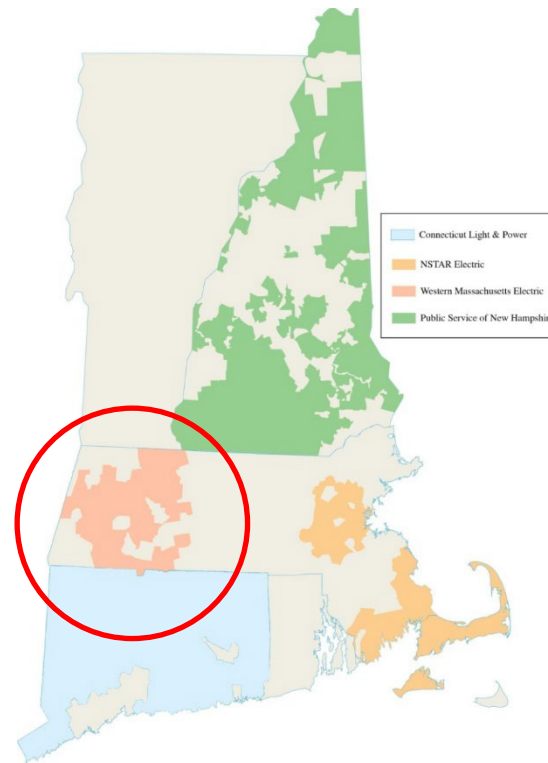
- Detailed engineering studies will be performed once the group studies are initiated
- The following indicates a high level of system upgrades required as part of the analysis. These sites are noted on an informational basis and will be formally added to the LSP once approved as part of the ESMP
- Groups:
  - **East Freetown:** This study is reviewing the needs at the Industrial Park and for a New East Freetown #690 substation with 3 62.5 MVA transformers
  - **Maynard-Action:** This study is reviewing the needs at Maynard #416, no additional transformer upgrades have been identified
  - **Walpole-Sharon:** This study is reviewing the needs at Walpole #146, no additional transformer upgrades have been identified

<sup>1</sup>[Eversource Electric Sector Modernization Plan download \(mass.gov\)](#)

# Western Massachusetts Projects

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





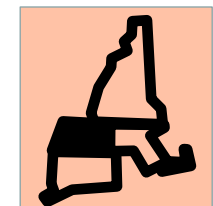
Western MA

# TRANSMISSION LINE PROJECTS

# Underground Cable Modernization Program

Replacement of PTC with XLPE addresses equipment availability concerns, environmental concerns, better accommodates future system expandability, and provides the most reliable and least risk solution over the long-term

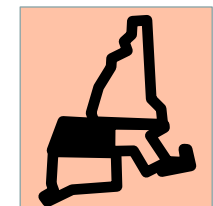
ID	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-070	115kV Line 1544/1755 XLPE Replacement	Replace pipe-type (PTC) circuits between Clinton and West Springfield with solid dielectric cross-linked polyethylene (XLPE) technology.	2026	Planned	ES-22-T45 ES-22-T46	TBD	No Changes
ES-23-LSP-081	115kV Line 1322 XLPE Replacement	Rebuild the existing 1322 Line HPFF between Breckwood SS (Springfield) and East Springfield SS cable system with solid dielectric cross-linked polyethylene (XLPE) technology.	2028	Proposed	TBD	TBD	No Changes
ES-23-LSP-085	115kV Line 1433 XLPE Replacement	Rebuild the existing 1433 Line HPFF between Breckwood SS (Springfield) and West Springfield SS cable system with solid dielectric cross-linked polyethylene (XLPE) technology.	2029	Proposed	TBD	TBD	No Changes

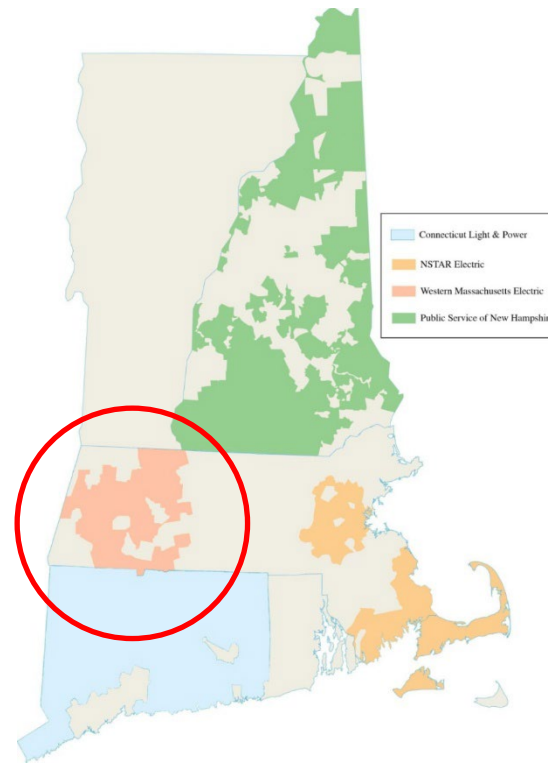




# Other Transmission Line Projects

ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-24-LSP-156	Asset Condition	Line 1645 and 1556 Rebuild	Replace deteriorating structures and conductor from Cadwell substation to East Springfield substation	Dec-2024	Under Construction	ES-24-T18 ES-24-T19	\$9.5	New
ES-23-LSP-068	Asset Condition/ Local Reliability	Line 1231/1242 Upgrade Project - Associated Upgrades	Terminal structure replacements and ADSS installation at line terminal substations, Ashfield and Plainfield. NonPTF work associated with ACL 250.	Dec-2024	Under Construction	N/A	\$17.5	Yes
ES-23-LSP-086	Local Reliability	Springfield Area Reliability Project	Add 115kV transmission circuit from Clinton to Breckwood. Possible station work at each end. Project to be coordinated with new Midtown Substation (ES-24-LSP-138).	2035	Concept	TBD	TBD	Yes



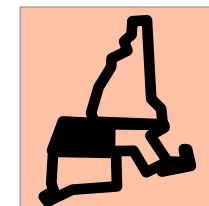


Western MA

# SUBSTATION PROJECTS: NEW SUBSTATIONS

# New Substation Projects

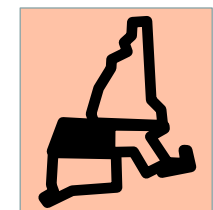
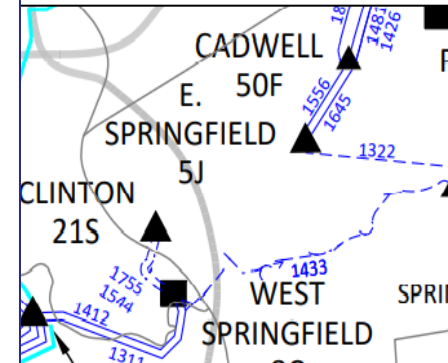
ID	Need Category	Title	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-087	Local Reliability / DER Group Study	Whately/Hatfield Substation	Build a new 115/13.8kV substation (Whately-Hatfield Substation) in Whately-Hatfield area with two 62.5 MVA 115/13.8-kV transformers. Add two 115-kV transmission circuits connecting the new substation to the transmission system with possibly one from Cumberland and one from Podick with terminal work at same stations.	2032	Concept	TBD	TBD	Yes
ES-23-LSP-088	Local Reliability	Hilltown Substation	Build a new 115/23kV substation (Hilltown Substation) in Worthington/Chester area with two 62.5 MVA 115/23-kV transformers. Add two 115-kV transmission circuits connecting the new substation to the transmission system with possibly one from Plainfield 18K and one from Blandford with terminal work at same stations.	2030	Concept	TBD	TBD	No
ES-24-LSP-138	Local Reliability	Midtown Substation	Split 115kV transmission circuit from Clinton to Breckwood (ES-23-LSP-086). Reconfigure Cadwell Station with the addition of a single circuit breaker. Build a new 115/13.8 kV station (Worthington St. Midtown Substation) in Springfield with two 62.5MVA 115/13.8kV transformers.	2039	Concept	TBD	TBD	New



# Springfield Area Reliability Project & New Midtown Substation

Project updates  
in blue

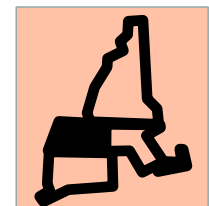
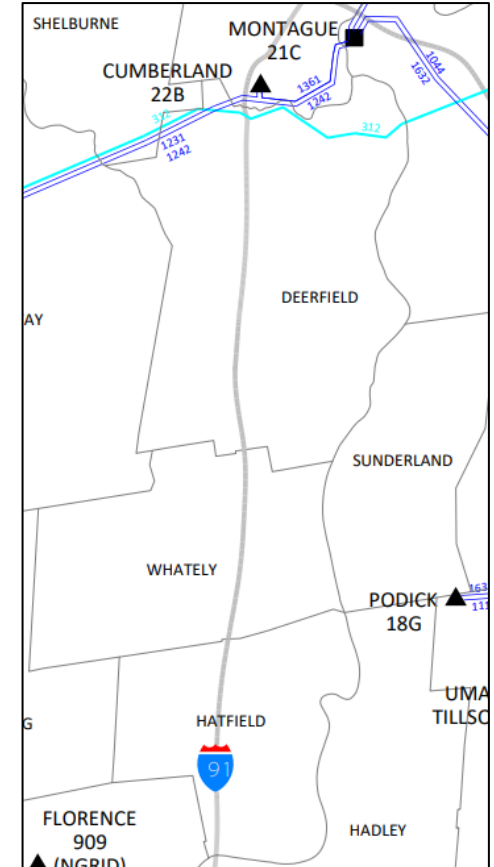
<b>ID</b>	ES-23-LSP-086 & ES-24-LSP-138
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	<p><b><u>ES-23-LSP-086</u></b> N-1-1 loss of load violates the consequential load loss criteria in the Transmission System Design and Analysis Guideline (TSDAG).</p> <p><b><u>ES-24-LSP-138</u></b> The load in the City of Springfield, MA is served by the following six (6) substations: Clinton, West Springfield, East Springfield, Franconia, Breckwood, and Orchard. These provide back up to each other by distribution field ties. However, even with the field ties, not all load can be backed-up if the primary substation transmission sources suffer an outage. Loss of the 1544 and 1755 Lines will cause 10,134 customers, over 40-MW, to remain permanently out of power which violates Eversource consequential loss of load criteria (Transmission System Design &amp; Analysis Guideline; Section 3.5; "The threshold for the Residual Load Loss resulting from the loss of two underground transmission cables supplying radial load is 0-MW."). Likewise, loss of the 1322 and 1433 lines will cause approximately 10,500 customers, over 25-MW, to remain without power following the loss of the two cable circuits. The customers impacted include critical customers such as hospitals and universities.</p>
<b>Solution Description</b>	<p><b><u>ES-23-LSP-086</u></b> Add 115kV transmission circuit from Clinton to Breckwood. Possible station work at each end. Project to be coordinated with new Midtown Substation (ES-24-LSP-138)</p> <p><b><u>ES-24-LSP-138</u></b> Split 115kV transmission circuit from Clinton to Breckwood (ES-23-LSP-086). Reconfigure Cadwell Station with the addition of a single circuit breaker. Build a new 115/13.8 kV station (Worthington St. Midtown Substation) in Springfield with two 62.5MVA 115/13.8kV transformers.</p>
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected ISD</b>	2035 (ES-23-LSP-086), 2039 (ES-24-LSP-138)



# Whately/Hatfield Substation

Project updates in blue

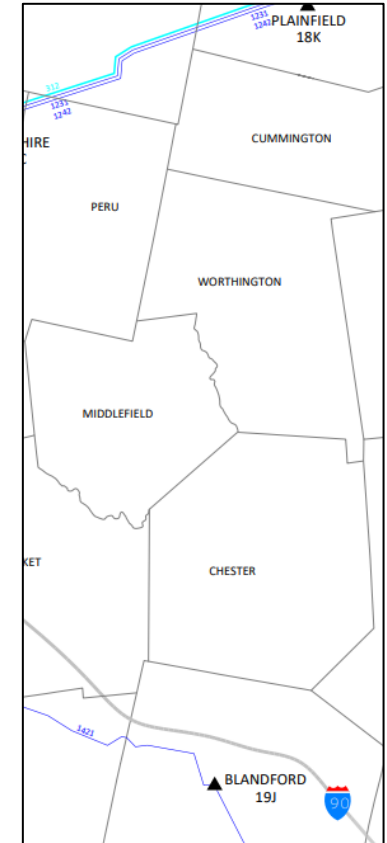
<b>ID</b>	ES-23-LSP-087
<b>Need Category</b>	Local Reliability/ <b>DER Group Study</b>
<b>Need Description</b>	To address substation capacity and distribution line reliability needs in the Whately/South Deerfield/Hatfield area of Western Massachusetts. In addition, this project will resolve future needs due to requested load interconnections in the area resulting from the expansion of controlled-agriculture and commercial sectors.
<b>Solution Description</b>	Build a new 115/13.8kV substation (Whately-Hatfield Substation) in Whately-Hatfield area with two 62.5 MVA 115/13.8-kV transformers. Add two 115-kV transmission circuits connecting the new substation to the transmission system with possibly one from Cumberland 22B and one from Podick 18G with terminal work at same stations.
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected In-Service</b>	<b>2032</b>

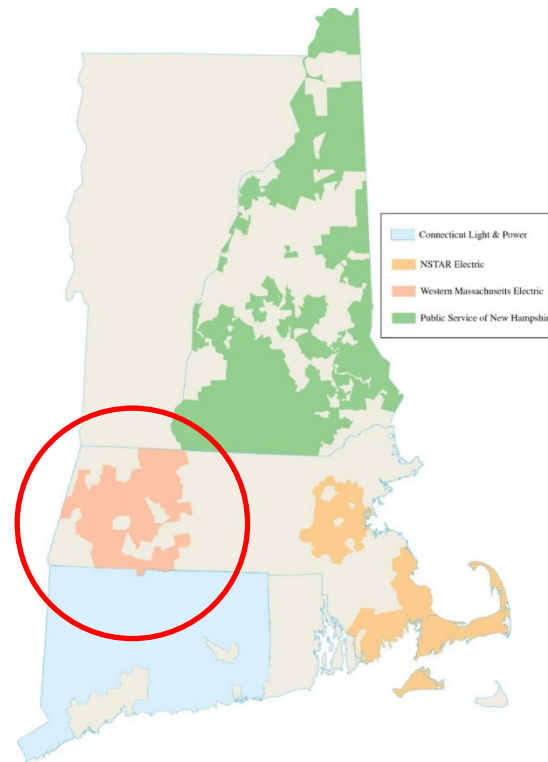


# Hilltown Substation

Project updates in blue

<b>ID</b>	ES-23-LSP-088
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	To address substation capacity and distribution line reliability needs in the Worthington/Chester area of Western Massachusetts. In addition, this project will resolve future needs due to increasing levels of DER interconnections in the area.
<b>Solution Description</b>	Build a new 115/23kV substation (Hilltown Substation) in Worthington/Chester area with two 62.5 MVA 115/23-kV transformers. Add two 115-kV transmission circuits connecting the new substation to the transmission system with possibly one from Plainfield and one from Blandford with terminal work at the same stations.
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2030



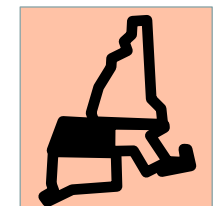


Western MA

# SUBSTATION PROJECTS: TRANSFORMER ADDITIONS & REPLACEMENTS

# Transformer Additions & Replacements

ID	Station	Need Category	Old Transformer	New Transformer	Project Status	ISD, Projected	PPA ID	Changes From Last Year
ES-23-LSP-067	Franconia Substation	Local Reliability	115/13.8 kV 47 MVA, 2X	62.5 MVA	In-Service	May-2024	ES-21-T98	Yes
ES-23-LSP-066	Montague Substation	Asset Condition/ Local Reliability	115/13.8 kV 30 MVA, 3X	62.5 MVA	Under Construction	Nov-2024	ES-23-T60	Yes
ES-23-LSP-069	Clinton Substation	Local Reliability	115/13.8 kV 30 MVA, 2X	62.5 MVA	Planned	Dec-2025	ES-21-T99	No Changes
ES-23-LSP-072	Plainfield Substation	Local Reliability	115/23kV 30 MVA, 1X	62.5 MVA	Proposed	2026	TBD	Yes
ES-23-LSP-074	Pleasant Substation	Asset Condition/ Local Reliability	115/13.8 kV 30 MVA, 2X	62.5 MVA	Concept	2026	TBD	No Changes
ES-23-LSP-075	Ludlow Substation	Local Reliability	New addition	115/13.8kV 62.5 MVA, 2X	Concept	2026	TBD	Yes
ES-24-LSP-153	Piper Substation	Asset Condition/ Local Reliability	110/14.4 kV 41.6 MVA, 2X	62.5 MVA	Concept	2026	TBD	New
ES-24-LSP-154	Piper Substation	Asset Condition/ Local Reliability	110/14.4 kV 41.6 MVA, 1X	62.5 MVA	Concept	2026	TBD	New
ES-23-LSP-079	Silver Substation	Local Reliability	115/13.8 kV 47 MVA, 1X	62.5 MVA	Concept	2027	TBD	No Changes



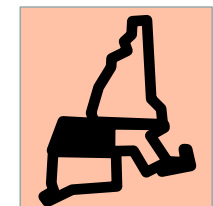
Primarily Distribution, the Transmission cost is less than \$5M

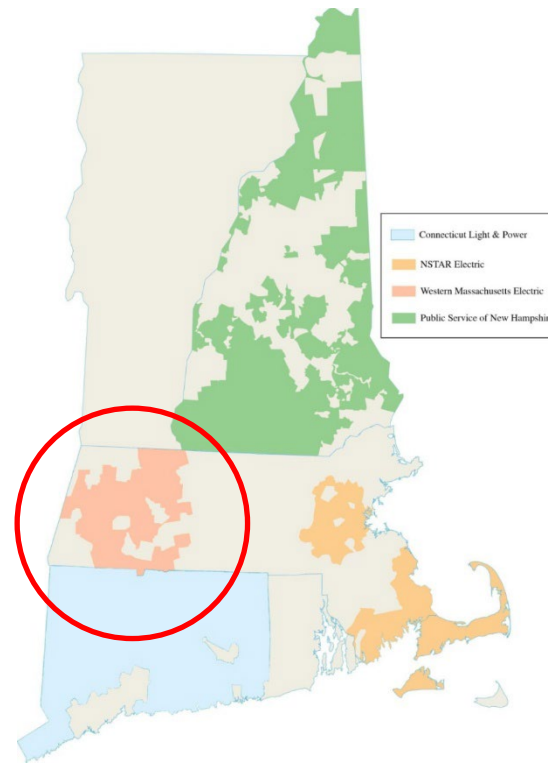


# Transformer Additions & Replacements - Continued

ID	Station	Need Category	Old Transformer	New Transformer	Project Status	ISD, Projected	PPA ID	Changes From Last Year
ES-23-LSP-080	Silver Substation	Local Reliability	115/13.8 kV 47 MVA, 2X	62.5 MVA	Concept	2027	TBD	No Changes
ES-23-LSP-076	West Springfield Substation	Asset Condition/ Local Reliability	115/13.8 kV 30 MVA, 1X	62.5 MVA	Concept	2028	TBD	Yes
ES-23-LSP-077	West Springfield Substation	Asset Condition/ Local Reliability	115/13.8 kV 30 MVA, 2X	62.5 MVA	Concept	2028	TBD	Yes
ES-23-LSP-078	Partridge Substation	Local Reliability	New addition	115/23kV 62.5 MVA, 2X	Concept	2028	TBD	Yes
ES-23-LSP-082	Franconia Substation	Local Reliability	115/13.8 kV 47 MVA, 3X	62.5 MVA	Concept	2028	TBD	No Changes
ES-23-LSP-084	Midway Substation	Asset Condition/ Local Reliability	115/13.8 kV 20 MVA, 1X, 2X, and 3X Y-D	Three 62.5 MVA D-Y	Concept	2029	TBD	Yes
ES-23-LSP-083	Woodland Substation	Asset Condition/ Local Reliability	115/23 kV 25 MVA, 1X	62.5 MVA	Concept	2030	TBD	Yes
ES-23-LSP-073	Clinton Substation	Asset Condition/ Local Reliability	115/13.8 kV 30 MVA, 1X	62.5 MVA	Concept	2033	TBD	Yes

Primarily Distribution, the Transmission cost is less than \$5M



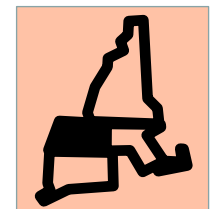


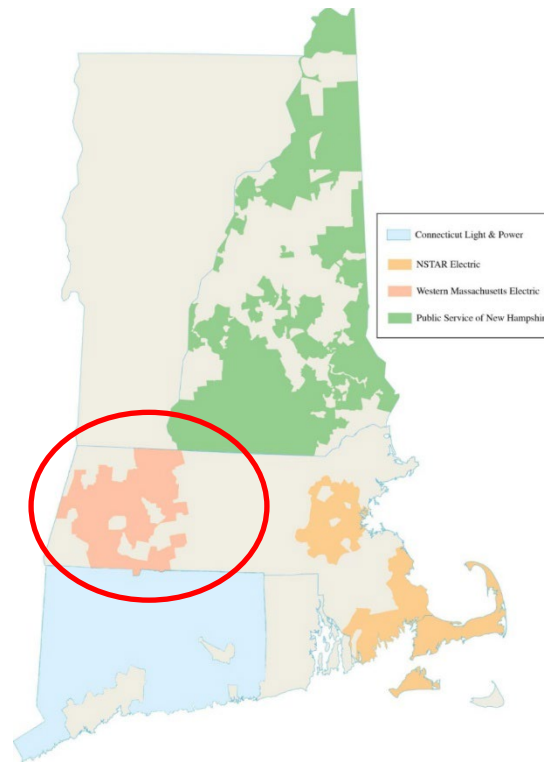
Western MA

# DER GROUP STUDIES

# DER Group Studies

ID	Project Type	Title	Solution Description	ISD, Projected	Project Status	Transmission Cost, Estimated (\$M)	PPA ID	Changes From Last Year
ES-23-LSP-071	Substation Reconfiguration / Expansion	Blandford Substation - Transformer Replacements	Replace existing 115/23kV 1X (30 MVA) and 2X (25 MVA) transformers with 62.5 MVA transformers.	2028	Proposed	N/A	TBD	Yes





Western MA

# ELECTRIC SECTOR MODERNIZATION PROJECTS (ESMP)

# DER Groups, Pending DPU Approval

## Electric Sector Modernization Plan<sup>1</sup> Projection

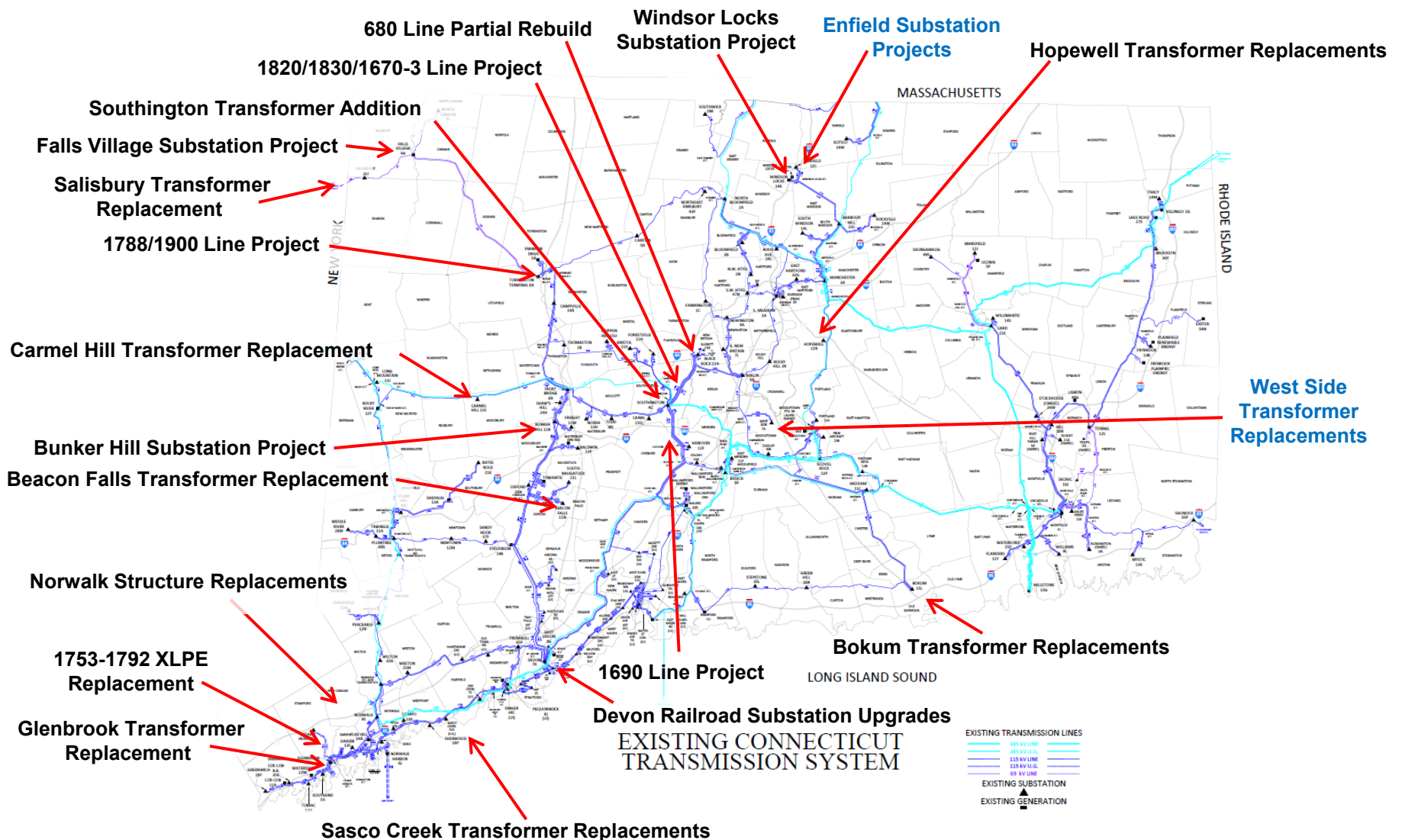
Total of three (3) Distribution Study Groups identified in Western MA

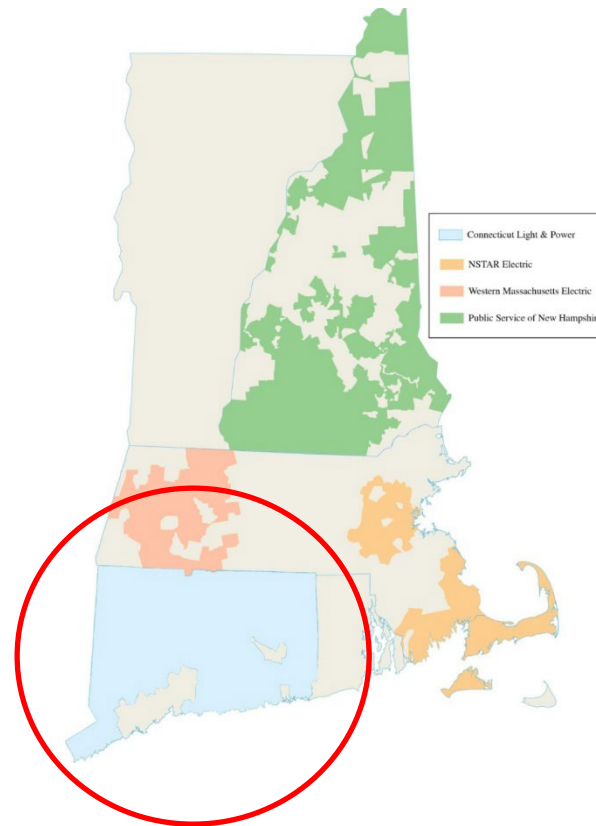
- Detailed engineering studies will be performed once the group studies are initiated
- The following indicates a high level of system upgrades required as part of the analysis; these sites are noted on an informational basis and will be formally added to the LSP once approved as part of the ESMP
- Groups:
  - **Dalton-Hinsdale:** This study is reviewing the needs at the Berkshire substation and has identified a need to upgrade the existing transformer to 62.5 MVA and to install two additional 62.5 MVA transformers.
  - **Southwick-Granville:** This study is reviewing the needs at the Southwick substation and has identified a need to upgrade both (2) of the existing transformers to 62.5 MVA and to install a third additional 62.5 MVA transformer
  - **Whately-Deerfield:** This study is reviewing the needs of the Whately-Deerfield region. It has identified a need to upgrade the existing transformer to 62.5 MVA at French King and install an additional 62.5 MVA transformer, and a need for two 62.5 MVA transformers at the new Whately Substation (ES-23-LSP-087)

<sup>1</sup>[Eversource Electric Sector Modernization Plan download \(mass.gov\)](#)

# Connecticut Projects

Proposed, Planned, and Under Construction projects only





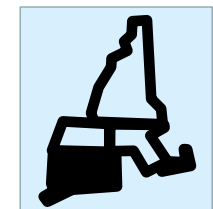
Connecticut

# TRANSMISSION LINE PROJECTS

# Underground Cable Modernization Program

Replacement of PTC with XLPE addresses equipment availability concerns, environmental concerns, better accommodates future system expandability, and provides the most reliable and least risk solution over the long-term

ID	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-118	115kV Line 1753-1792 XLPE Replacement	Replace pipe-type cable (PTC) circuits between Glenbrook and Cedar Heights with solid dielectric cross-linked polyethylene (XLPE) technology.	2028	Planned	ES-22-T47 ES-22-T48	\$240.0	Yes
ES-23-LSP-122	115kV Line 1270-1337 XLPE Replacement	Replace pipe-type cable (PTC) circuits between Triangle and Middle River with solid dielectric cross-linked polyethylene (XLPE) technology.	2028	Concept	TBD	\$185.2	Yes





# Other Transmission Line Projects

ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-100	Asset Condition/Reliability	1163 and 1550 - Tap Project	The project is a rebuild of Line 1163-3 and 1550-2 replacing 3 miles (1.5-miles per circuit) of existing 4/0 copper conductor with 1272-kcmil ACSS conductor.	Jul-2024	In-Service	ES-23-T11 ES-23-T12 ES-23-T13 ES-23-T14	\$13.3	Yes
ES-23-LSP-103	Local Reliability	Norwalk-CDOT replace structures at Norwalk River crossing (Norwalk)	The project consists of relocating two existing 115-kV transmission lines from an overhead portion of the railroad corridor to underground. The new underground sections will, for both circuits, consist of approximately 1,200 feet of trenched duct bank on the West side of the Norwalk River, approximately 1,100 feet of HDD underneath the Norwalk River, and approximately 2,200 feet of trenched duct bank on the East side of the Norwalk River. Also, two short overhead railroad crossings of approximately 177 feet and 108 feet, respectively, are required on the 1028 line.	May-2025	Under Construction	TBD	\$56.2 (Approximately 50% reimbursable)	Yes
ES-23-LSP-105	Asset Condition/Local Reliability	115kV Line 1690 Copper Retirement	Replace deteriorating copper materials with ACSS conductor and OPGW shield wire	Jun-2025	Under Construction	ES-23-T35	\$35.6	Yes



# Other Transmission Line Projects – Cont'd.

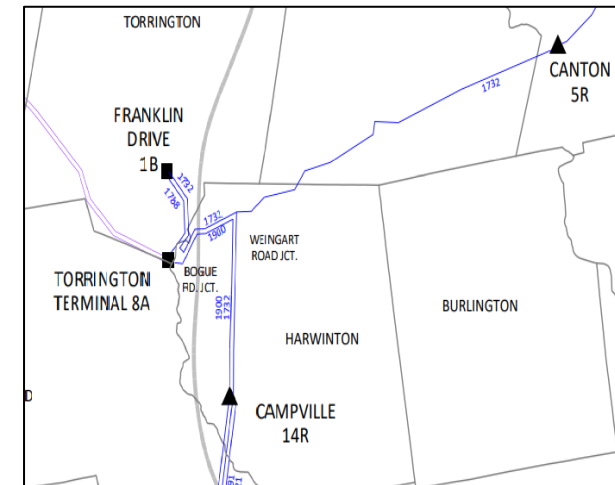
ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-102	Local Reliability	Campville 14R - Circuit Breaker and 1788-1900 Single DCT Split	Install 115-kV series circuit breaker 4TA and split the single 1788/1900 double circuit tower (DCT).	Dec-2025	Planned	ES-23-T29	TBD	Yes
ES-23-LSP-115	Asset Condition	Line 680 Partial Rebuild	Replace deteriorating copper shield wire with OPGW as well as deteriorating copper conductor with 1590-kcmil ACSS conductor	2026	Proposed	TBD	\$6.3	Yes
ES-23-LSP-109	Asset Condition/ Local Reliability	115kV Line 1820/1830/1670-3 - Copper Conductor Replacement/Rebuild	Replace deteriorating structures and obsolete conductor from Southington substation to Black Rock substation	2027	Proposed	TBD	TBD	Yes



# Campville 14R - Circuit Breaker & 1788/1900 Double Circuit Tower (DCT) Separation

Project updates in blue

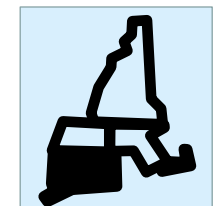
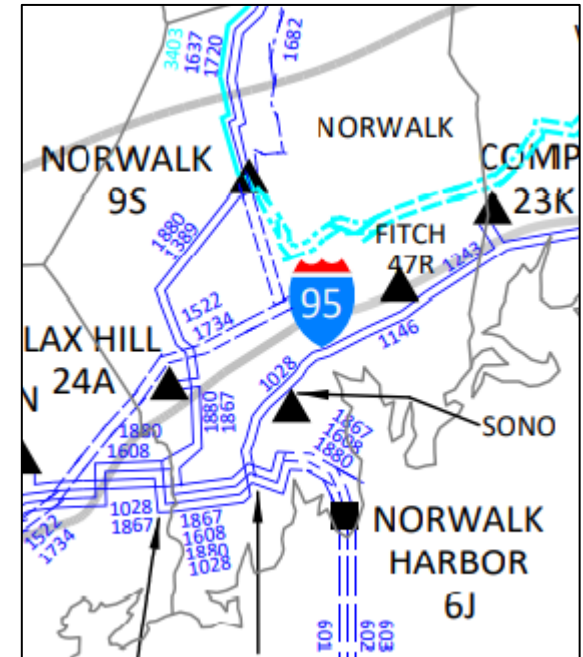
<b>ID</b>	ES-23-LSP-102
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	To address Eversource's Transmission System Design and Analysis Guideline Rev. 0 criteria violation of not allowing a single transmission event to cause the loss of supply to more than one distribution transformer serving customer load. A single transmission contingency (N-1) involving the Campville 4T breaker failure or the 1788/1900 DCT fault will result in the loss of 5 distribution transformers serving load at Campville 14R, Canton 5R, Franklin Drive 1B, and Torrington Terminal 8A.
<b>Solution Description</b>	Install 115-kV series circuit breaker 4TA and split the single 1788/1900 double circuit tower (DCT)
<b>Status</b>	Planned, ES-23-T29
<b>Cost</b>	TBD
<b>Projected In-Service</b>	Dec-2025

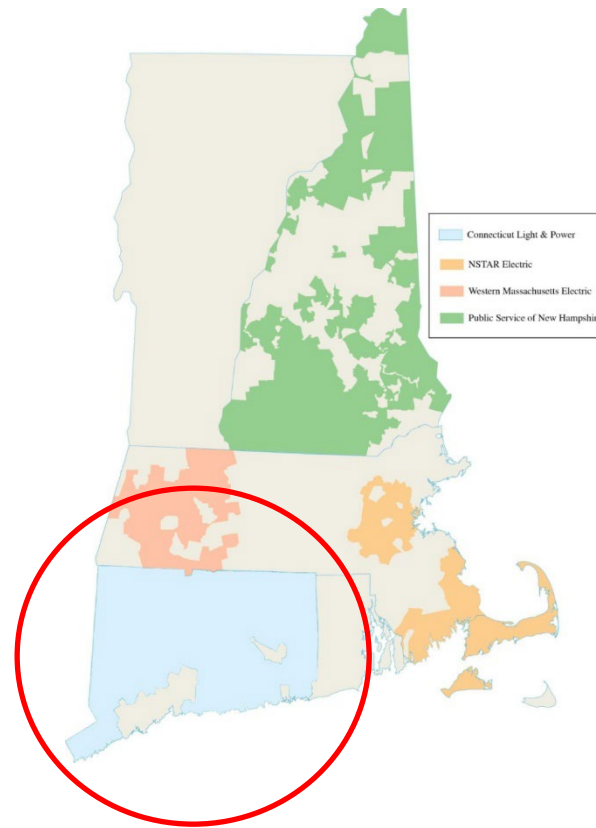


# Norwalk River Crossing (Norwalk)

Project updates in blue

ID	ES-23-LSP-103
Need Category	Local Reliability
Need Description	The purpose of the Project is to permanently relocate a portion of the 1028 and 1146 transmission lines to facilitate and support Connecticut Department of Transportation (CDOT) replacement of the existing Walk Bridge in the City of Norwalk, CT. The replacement bridge design cannot accommodate the co-location of Eversource's transmission lines; therefore, the relocation of the lines must be permanent.
Solution Description	The Project consists of relocating two existing 115-kV transmission lines from an overhead portion of the railroad corridor to underground. The new underground sections will, for both circuits, consist of approximately 1,200 feet of trenched duct bank on the West side of the Norwalk River, approximately 1,100 feet of HDD underneath the Norwalk River, and approximately 2,200 feet of trenched duct bank on the East side of the Norwalk River. Also, two short overhead railroad crossings of approximately 177 feet and 108 feet, respectively, are required on the 1028 line.
Status	Under Construction
Cost	\$56.2M (Approximately 50% Reimbursable)
Projected In-Service	May-2025





Connecticut

# SUBSTATION PROJECTS: NEW SUBSTATIONS

# New Substation Projects

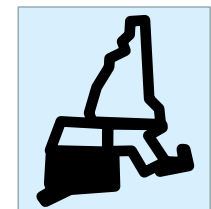
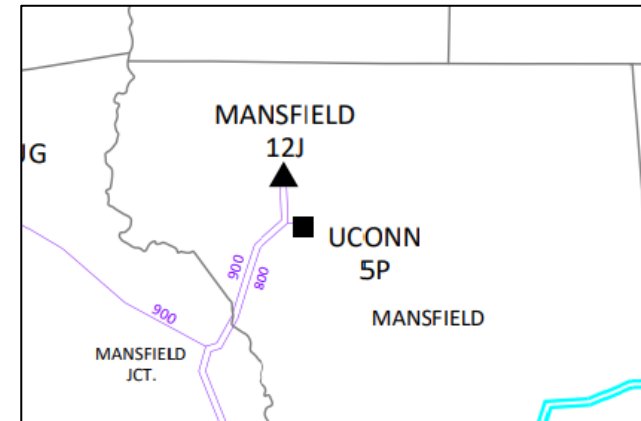
ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-117	Local Reliability	Mansfield Area Substation and 900 Line Extension Project	Conversion of the Card to Mansfield corridor from 69-kV to 115-kV, expansion of the existing Mansfield to a ring bus by the addition of 4 circuit breakers, addition of a tie to a new UConn substation and associated upgrades	2027	Concept	TBD	TBD	Yes
ES-23-LSP-123	Local Reliability	Burrville 29J New Bulk Station	New 115 kV bulk substation in Torrington, CT with two 62.5 MVA transformers supplied via two 115 kV transmission circuits from the existing transmission circuits at Weingart Road Junction in Harwinton, CT	2031	Concept	TBD	TBD	No Changes



# Mansfield Area Substation and 900 Line Extension Project

Project updates in blue

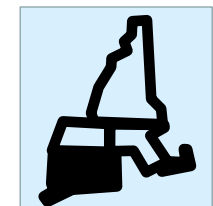
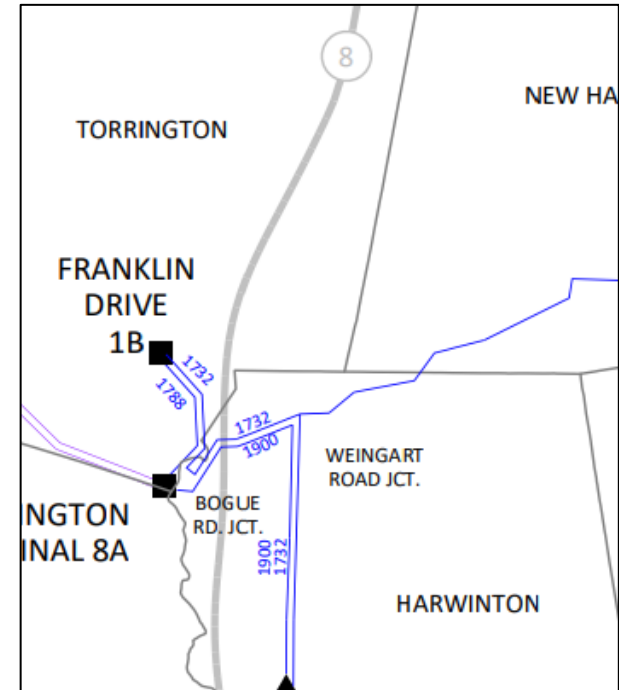
<b>ID</b>	ES-23-LSP-117
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	To serve significant projected load increase (35MW to 75MW) around UConn Storrs, CT campus.
<b>Solution Description</b>	Conversion of the Card to Mansfield corridor from 69-kV to 115-kV, expansion of the existing Mansfield 12J to a ring bus by the addition of 4 circuit breakers, addition of a tie to a new UConn substation and associated upgrades
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2027



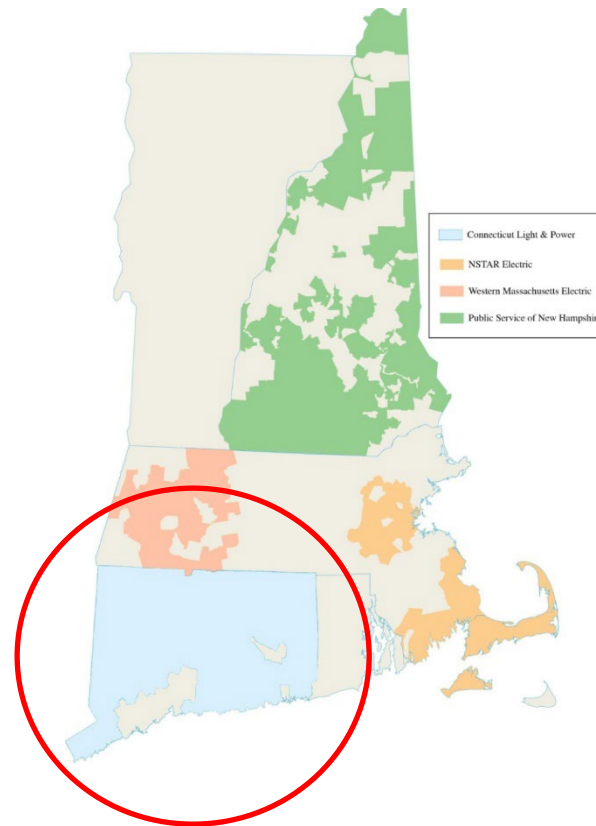
# Burrville 29J New Bulk Substation

No updates for 2024

<b>ID</b>	ES-23-LSP-123
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	This project has multiple drivers including flood mitigation, reliability, load-serving capacity requirements, distribution station consolidation, PV/EV hosting, voltage regulation, and asset condition under SYS PLAN 010 and the DSPG. Burrville 29J was included in the Substation Flooding Mitigation Plan under System Resiliency's Docket 12-07-06RE01 as part of a group of substations in need of flood mitigation.
<b>Solution Description</b>	New 115 kV bulk substation in Torrington, CT with two 62.5 MVA transformers supplied via two 115 kV transmission circuits from the existing transmission circuits at Weingart Road Junction in Harwinton, CT
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2031







Connecticut

# SUBSTATION PROJECTS: STATION EXPANSIONS & RECONFIGURATIONS

# Station Expansions & Reconfigurations

ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-097	Local Reliability	Gales Ferry Substation - Rebuild substation and add transformers	Convert substation from 69 kV to 115 kV. Replace existing transformers with two new 62.5 MVA transformers. This project listing includes the non-PTF and distribution components of RSP 1856-1859 and 1864	Dec-2023	In-Service	ES-21-T33	N/A (Transmission costs listed on RSP)	Yes
ES-23-LSP-104	Local Reliability	Bunker Hill Substation Reconfiguration (Waterbury)	Addition of three (3) new 115-kV circuit breakers and reconfigure the Bunker Hill 115 kV substation into a six-breaker ring bus including substation modifications.	Dec-2025	Under Construction	ES-21-T18	\$34.8	Yes
ES-23-LSP-113	Local Reliability	Falls Village Substation - Reconfiguration	Replace 69/13.2kV 25 MVA transformer with 40 MVA transformer. Reconfigure existing switchyard by replacing 2 existing and adding 6 new circuit breakers.	2026	Planned	ES-22-T01	TBD	No Changes
ES-23-LSP-120	Asset Condition/ Local Reliability	Enfield Substation - Expansion	Replace the existing tie breaker with a PASS-MO breaker to improve load serving reliability.	2027	Proposed	ES-23-T62	TBD	Yes



# Station Expansions & Reconfigurations - Continued

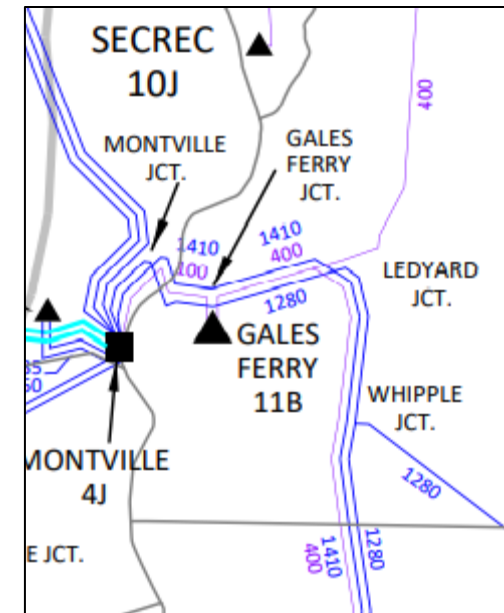
ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-121	Local Reliability	Rocky Hill Substation Capacity Increase	Upgrade the substation to increase the substation load carrying capacity and to address transmission N-1 reliability violations.	2027	Concept	TBD	TBD	No Changes
ES-24-LSP-142	Asset Condition/ Local Reliability	Bloomfield Substation - Expansion	Replace the existing tie breaker with a PASS-MO breaker to improve load serving reliability.	2027	Concept	TBD	TBD	New
ES-23-LSP-119	Asset Condition/ Local Reliability	Windsor Locks Substation - Expansion	Replace the existing tie breaker with two series breakers to improve load serving reliability.	2029	Planned	ES-23-T61	TBD	Yes



# Gales Ferry Substation - Rebuild substation and add transformers

Project updates in blue

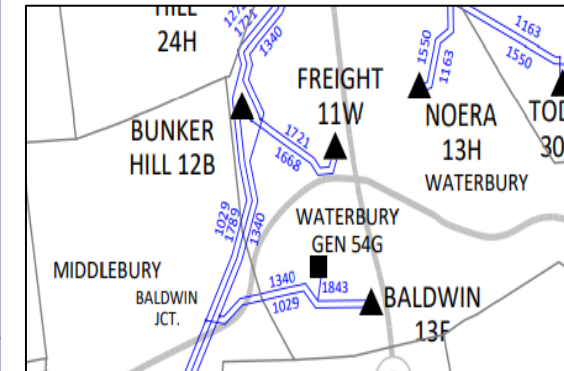
ID	ES-23-LSP-097
Need Category	Local Reliability
Need Description	100 and 400 lines are being converted from 69 kV to 115 kV as part of the Eastern Connecticut Solution, see RSP1856-1859 and 1864
Solution Description	<p>Convert substation from 69 kV to 115 kV. Replace existing transformers with two new 62.5 MVA transformers.</p> <p>This project listing includes the non-PTF and distribution components of RSP 1856-1859 and 1864</p>
Status	In-Service
Cost	N/A (Transmission costs listed on RSP)
Projected In-Service	Dec-2023

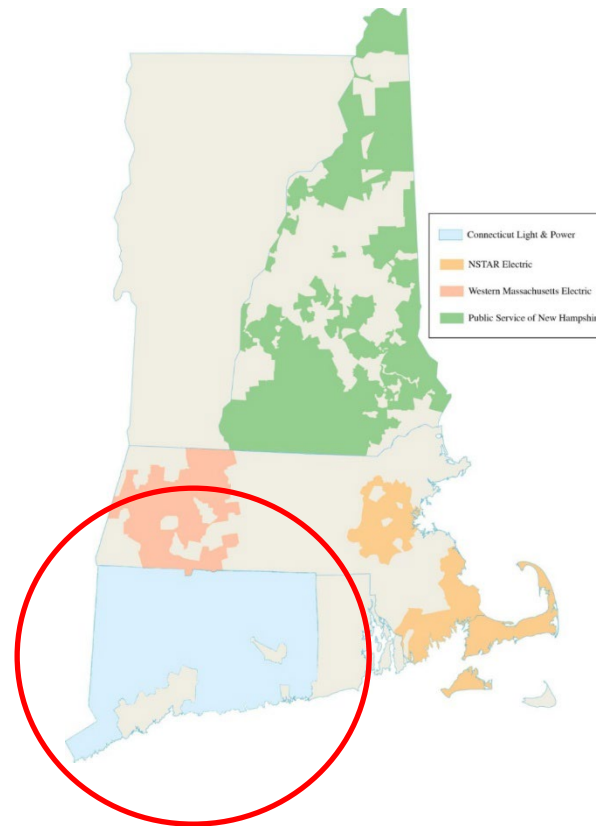


# Bunker Hill Substation reconfiguration (Waterbury)

Project updates in blue

<b>ID</b>	ES-23-LSP-104
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	<p>This project is required to address single transmission event resulting in the loss of the entire substation feeding approximately 13,000 customers in Southwest Connecticut and 60MW of load which violates Transmission System Design and Analysis Guideline Rev. 0 (old SYSPLAN010 Appendix A). Also, the substation design violates the Transmission System Design and Analysis Guideline Rev. 0 substation design criteria (old SYSPLAN010 Appendix D.3)</p> <p>This project will address Eversource Planning criteria violation of not allowing a single transmission event to cause the loss of supply to more than one distribution transformer serving customer load. Also, this project will address the Eversource substation design criteria violation by upgrading the substation to a ring bus configuration from a straight bus configuration.</p>
<b>Solution Description</b>	Addition of three (3) new 115-kV circuit breakers and reconfigure the Bunker Hill 115 kV substation into a six-breaker ring bus including substation modifications.
<b>Status</b>	Under Construction
<b>Cost</b>	\$34.8M
<b>Projected In-Service</b>	Dec-2025





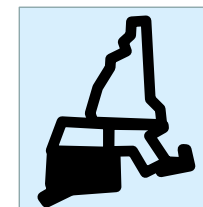
Connecticut

# SUBSTATION PROJECTS: TRANSFORMER ADDITIONS & REPLACEMENTS

# Transformer Additions & Replacements

ID	Station	Need Category	Old Transformer	New Transformer	Project Status	ISD, Projected	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-096	Mansfield Substation	Local Reliability	Two new additions and eliminate single 115/27.6 kV, 30 MVA	Two 115/23 kV 62.5 MVA	In-Service	Dec-2023	ES-20-T02	\$14.6	Yes
ES-23-LSP-098	Sandy Hook (Newtown) Substation	Local Reliability	New addition	115/23 kV 62.5 MVA	In-Service	Jun-2024	ES-21-T101	N/A	Yes
ES-24-LSP-146	Enfield Substation	Asset Condition/ Local Reliability	115/27.6 kV 50 MVA, 2X	62.5 MVA	Proposed	Apr-2025	TBD	N/A	New
ES-23-LSP-101	Salisbury Substation	Local Reliability	69/13.2 kV 13 MVA	62.5 MVA	Proposed	Aug-2025	TBD	N/A	Yes
ES-23-LSP-099	Sasco Creek Substation	Local Reliability	Two 115/27.6 kV 15 MVA, 1X and 2X	Two 115/26.4 kV 30 MVA	Proposed	2026	N/A	N/A	Yes
ES-23-LSP-107	Bokum Substation	Local Reliability	115/27.6 kV 50 MVA, 1X and 2X	Two 62.5 MVA	Planned	2026	ES-21-T90	N/A	Yes
ES-23-LSP-108	Beacon Falls Substation	Asset Condition/ Local Reliability	115/13.8 kV 46.7 MVA, 1X and 2X	Two 62.5 MVA	Planned	2026	ES-22-T24, ES-22-T25	N/A	Yes
ES-23-LSP-110	Southington Substation	Local Reliability	New addition	115/13.8 kV 62.5 MVA, 7X	Proposed	2026	TBD	N/A	Yes
ES-23-LSP-111	Franklin Drive Substation	Local Reliability	115/13.2 kV 25 MVA, 4X and 5X	Two 62.5 MVA	Concept	2026	TBD	N/A	Yes

Primarily Distribution, the Transmission cost is less than \$5M



# Transformer Additions & Replacements- Cont'd.

ID	Station	Need Category	Old Transformer	New Transformer	Project Status	ISD, Projected	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-112	North Canaan Substation	Asset Condition/Reliability	69/13.8 kV 25 MVA , 1X	115/69-13.8kV 40 MVA	Concept	2026	TBD	TBD	Yes
ES-23-LSP-114	Devon Railroad Substation	Local Reliability	Two 115/27.6 kV 25 MVA	Two 115/26.4 kV 50 MVA	Proposed	2026	N/A	N/A	Yes
ES-23-LSP-106	Hopewell Substation	Asset Condition/Local Reliability	115/23 kV 46.7 MVA, 2X and 3X	Two 62.5 MVA	Planned	2027	ES-22-T30 ES-22-T31	N/A	Yes
ES-23-LSP-116	Glenbrook Substation	Asset Condition/Local Reliability	115/13.2 kV 46.7 MVA, 2X	62.5 MVA	Proposed	2027	TBD	N/A	Yes
ES-24-LSP-139	West Brookfield Substation	Local Reliability	115/13.8 kV 25 MVA, 1X and 2X	Two 62.5 MVA and tie breaker	Concept	2027	TBD	TBD	New
ES-24-LSP-143	Berlin Substation	Local Reliability	115/13.8 kV 46.7 MVA, 1X and 2X	Two 62.5 MVA	Concept	2027	TBD	N/A	New
ES-24-LSP-140	Stevenson Substation	Local Reliability	115/27.6 kV 30 MVA, 1X and 7X	Two 115/23 kV 60 MVA	Concept	2028	TBD	TBD	New
ES-24-LSP-145	Westside Substation	Local Reliability	115/13.2 kV, 47 MVA 1X and 42 MVA 3X	Two 62.5 MVA and tie breaker	Proposed	2029	TBD	N/A	New

Primarily Distribution, the Transmission cost is less than \$5M

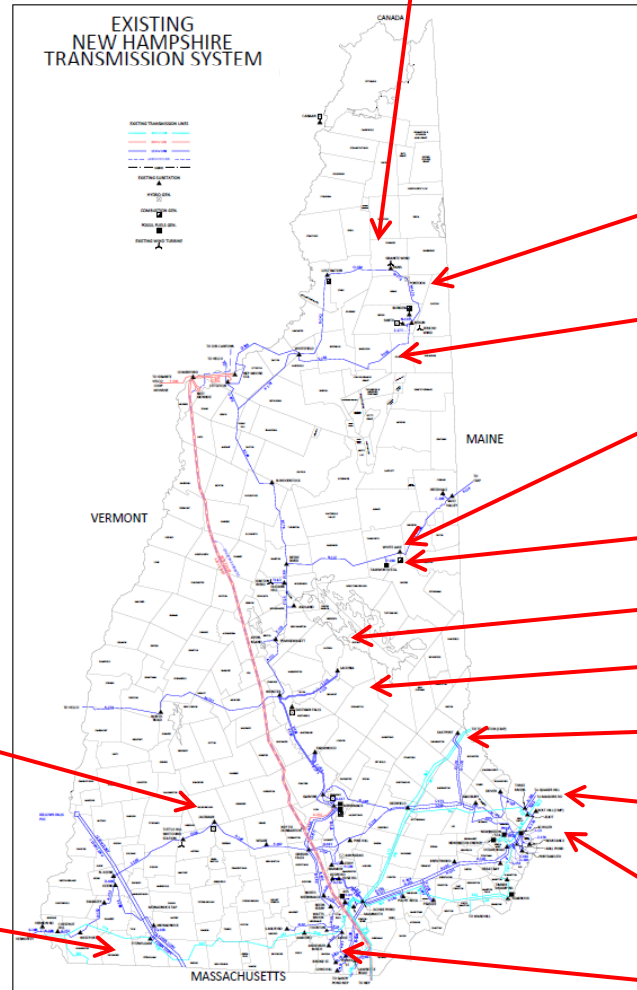




# New Hampshire Projects

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

## O154 Line Project



W179 Line Project

S136 Line Rebuild

White Lake Transformer Replacements

F190 Line Rebuild

Laconia Transformer Replacements

J125 Line Structure Replacements

Y170 Line Structure Replacements

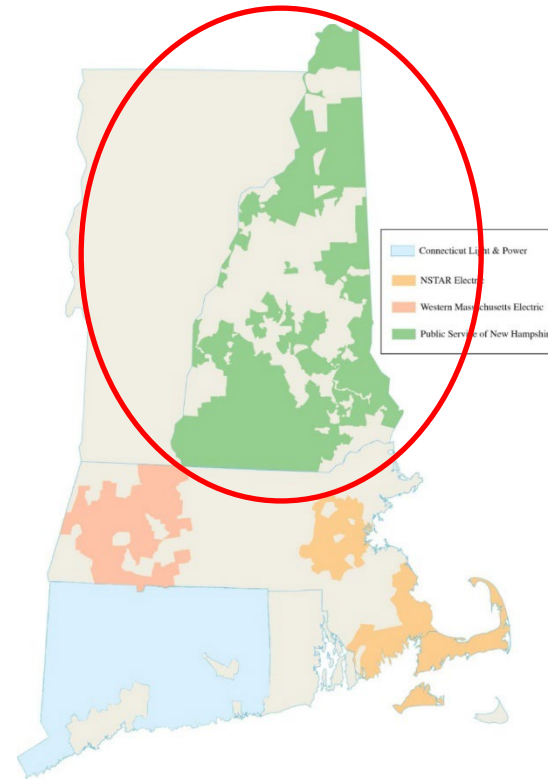
Dover Transformer Replacements

Resistance Substation Retirement

W157 Line Project

Jackman Transformer Replacement

Monadnock Transformer Replacements



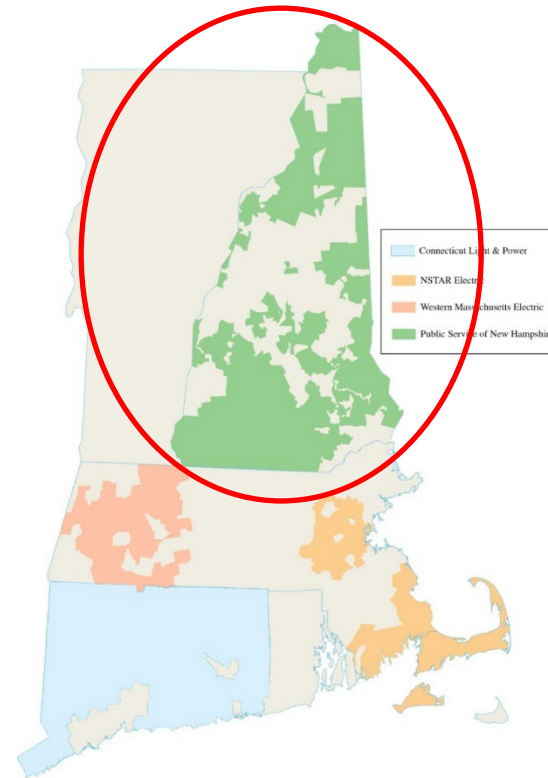
New Hampshire

# TRANSMISSION LINE PROJECTS

# Transmission Line Projects

ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	Transmission Cost, Estimated (\$M)	PPA ID	Changes From Last Year
ES-23-LSP-126	Asset Condition	O154 115kV Line Rebuild and Asset Condition Project	Rebuild the aging 115kV line with larger conductor and OPGW	Dec-2023	In-Service	\$35.0	ES-21-T41	Yes
ES-23-LSP-127	Asset Condition	W157 115kV Line Asset Condition Project	Replace deteriorating Alumoweld shieldwire with OPGW as well as deteriorating structures	Jun-2024	In-Service	\$16.5	N/A	Yes
ES-23-LSP-129	Asset Condition	F190 115kV Line Rebuild and Asset Condition Project	Replace 0.15 miles of conductor and 2 deteriorating structures	Jun-2024	In-Service	N/A	ES-23-T48, ES-23-T48-Rev-01	Yes
ES-23-LSP-128	Asset Condition	W179 11kV Line Rebuild and Asset Condition Project List	Rebuild the aging 115kV line with larger conductor and OPGW	Oct-2024	In-Service	\$64.5	ES-21-T42 ES-23-T57	Yes
ES-23-LSP-141	Asset Condition	Line Y170 Laminated Wood Structure Replacements	Replace deteriorated Laminated Wood Structures	Mar-2025	Under Construction	\$19.2	N/A	New
ES-23-LSP-131	Asset Condition	J125 115kV Line Asset Condition Project	Replace deteriorated Laminated Wood Structures	Dec-2025	Proposed	\$48.0	N/A	Yes
ES-23-LSP-134	Asset Condition	S136 115kV Line Rebuild and Asset Condition Project	Rebuild the aging 115kV line with larger conductor and OPGW	2026	Under Construction	\$139.8	ES-24-T16	Yes





New Hampshire

# SUBSTATION PROJECTS: STATION EXPANSIONS & RECONFIGURATIONS

# Station Expansion & Reconfigurations

ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-130	Asset Condition	Resistance Substation - Retirement	Resistance substation will be retired because all the equipment at the substation have reached the end of their useful life. All Resistance substation load will be transferred to the Portsmouth 115 kV substation.	Jun-2025	Planned	ES-23-T49	N/A	Yes
ES-23-LSP-132	Asset Condition/Reliability	Monadnock Substation - Transformer Replacements (Troy)	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.	2026	Planned	ES-23-T47	\$35.0	Yes
ES-23-LSP-133	Asset Condition/Reliability	White Lake Substation - Transformer Replacements (Tamworth)	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.	2027	Proposed	TBD	TBD	Yes



# Station Expansion & Reconfigurations (cont.)

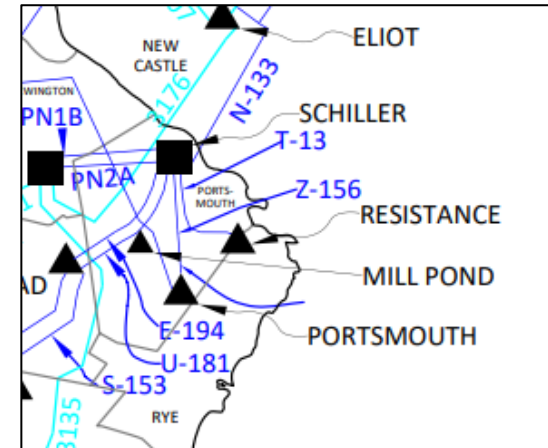
ID	Need Category	Project	Solution Description	ISD, Projected	Project Status	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-23-LSP-135	Asset Condition/Reliability	Dover (Cocheco St.) Substation - Transformer replacements (Dover)	Replace the existing two 115/34.5 kV, 44.8 MVA transformers 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.	2027	Proposed	TBD	TBD	No Changes
ES-23-LSP-136	Load Growth and Reliability	Laconia Substation - Transformer Replacements (Laconia)	Replace the existing two 115/34.5 kV, 44.8 MVA transformers at Laconia substation with two new 115/34.5 kV, 62.6 MVA transformers.	2027	Proposed	TBD	N/A	Yes
ES-24-LSP-150	Local Reliability	Webster Substation Reliability	Reconfigure the Webster 115 kV substation to address the N-1 criteria violations Eversource Transmission and Distribution planning criteria.	2030	Concept	TBD	TBD	New



# Retire the Resistance Substation

New Project

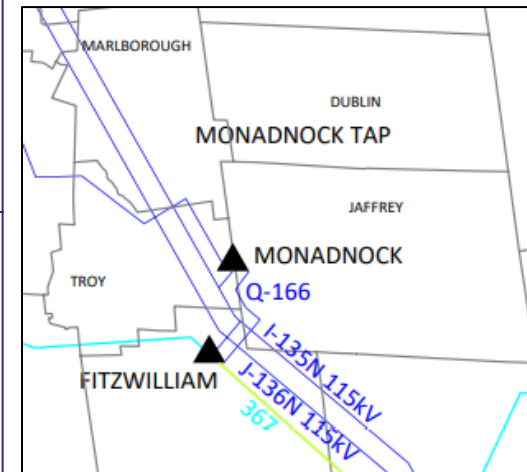
<b>ID</b>	ES-23-LSP-130
<b>Need Category</b>	Asset Condition
<b>Need Description</b>	<p>The existing substation equipment includes deteriorating infrastructure with some equipment 50 to 67 years old. Severe deterioration has been identified on equipment, foundations, steel, conduit, grounding, as well as other facilitates at their end of useful life.</p> <p>The recent upgrades at Portsmouth SS, located a ½ mile away, can support the area load requirements.</p>
<b>Solution Description</b>	Resistance substation will be retired because all the equipment at the substation have reached the end of their useful life. All Resistance substation load will be transferred to the Portsmouth 115 kV substation.
<b>Status</b>	Planned, ES-23-T49
<b>Cost</b>	N/A
<b>Projected In-Service</b>	June 2025



# Monadnock Substation - Transformer Replacements (Troy)

Project updates in blue

<b>ID</b>	ES-23-LSP-132
<b>Need Category</b>	Asset Condition / Reliability
<b>Need Description</b>	The projects needs include: (1) N-1 transmission contingency at Monadnock results in outage of the entire station and two distribution transformers which violates the Eversource local system planning criteria Distribution System Planning Guide (DSPG); (2) under N-1 conditions capacity deficiencies of existing transformers will result in customer outages which violates the Eversource local system planning criteria DSPG; (3) Asset condition issues of the existing transformers
<b>Solution Description</b>	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.
<b>Status</b>	Planned, ES-23-T47
<b>Cost</b>	\$35.0M
<b>Projected In-Service</b>	2026

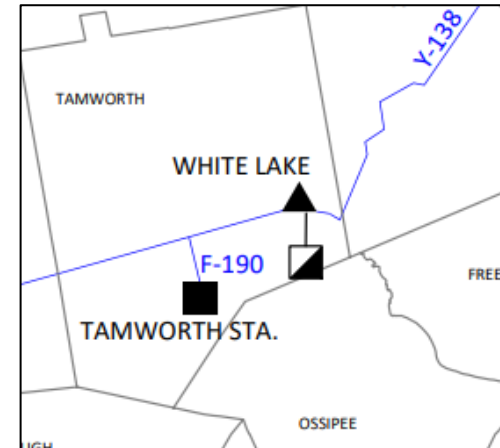




# White Lake Substation - Transformer Replacements (Tamworth)

Project updates in blue

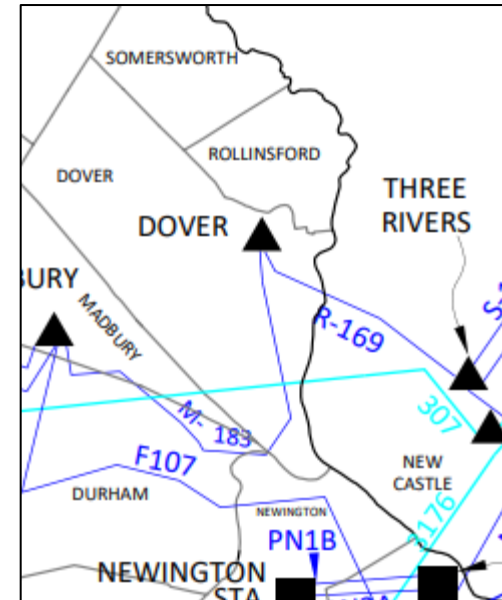
<b>ID</b>	ES-23-LSP-133
<b>Need Category</b>	Asset Condition / Reliability
<b>Need Description</b>	The projects needs include: (1) N-1 transmission contingency at White Lake results in outage of the entire station and two distribution transformers which violates the Eversource local system planning criteria Distribution System Planning Guide (DSPG); (2) under N-1 conditions capacity deficiencies of existing transformers will result in customer outages which violates the Eversource local system planning criteria DSPG; (3) Asset condition issues of the existing transformers, oil circuit breakers, and distribution strain bus structure.
<b>Solution Description</b>	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.
<b>Status</b>	Proposed
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2027



# Dover (Cocheco St.) Substation - Transformer Replacements (Dover)

No updates for 2024

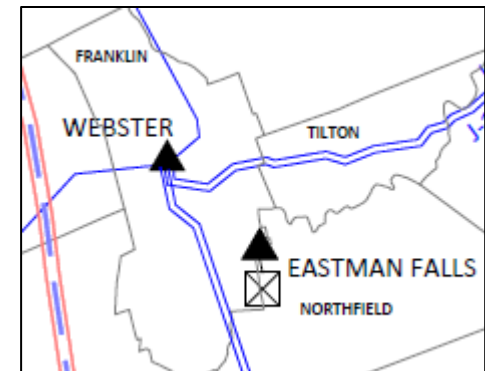
<b>ID</b>	ES-23-LSP-135
<b>Need Category</b>	Asset Condition / Reliability
<b>Need Description</b>	The projects needs include: (1) N-1 transmission contingency at Dover results in outage of the entire station and two distribution transformers which violates the Eversource local system planning criteria Distribution System Planning Guide (DSPG); (2) peak load demand is forecast to exceed 95% nameplate capacity which violates the Eversource local system planning criteria DSPG; (3) under N-1 conditions capacity deficiencies of existing transformers will result in customer outages which violates the Eversource local system planning criteria DSPG.
<b>Solution Description</b>	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.
<b>Status</b>	Proposed
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2027

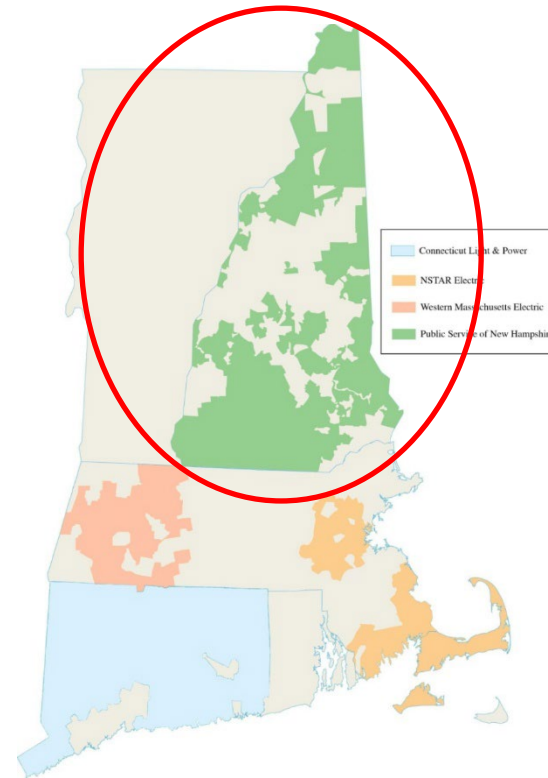


# Webster Substation Reliability

New addition for 2024

<b>ID</b>	ES-24-LSP-150
<b>Need Category</b>	Local Reliability
<b>Need Description</b>	N-1 transmission contingency at Webster results in outage of the entire station and multiple distribution transformers which violates the Eversource local system planning criteria Distribution System Planning Guide (DSPG)
<b>Solution Description</b>	Reconfigure the Webster 115 kV substation to address the N-1 criteria violations Eversource Transmission and Distribution planning criteria.
<b>Status</b>	Concept
<b>Cost</b>	TBD
<b>Projected In-Service</b>	2030





New Hampshire

# SUBSTATION PROJECTS: TRANSFORMER ADDITIONS & REPLACEMENTS

# Transformer Additions & Replacements

ID	Station	Need Category	Old Transformer	New Transformer	Project Status	ISD, Projected	PPA ID	Transmission Cost, Estimated (\$M)	Changes From Last Year
ES-24-LSP-152	Jackman (Hillsboro) Substation	Asset Condition/ Local Reliability	115/34.5 kV 28 MVA, TB61	62.5 MVA	Proposed	2027	TBD	N/A	New
ES-24-LSP-155	Eddy (Manchester) Substation	Asset Condition/ Local Reliability	Two 115/34.5 kV 44.8 MVA, TB26 and TB81	Two 62.5 MVA	Concept	2027	TBD	N/A	New
ES-23-LSP-137	South Milford Substation	Load Growth and Reliability	N/A	Add second 115/34.5 kV 62.5 MVA	Concept	2028	TBD	TBD	No Changes

Primarily Distribution, the Transmission cost is less than \$5M



*Thank you for participating in the  
Eversource LSP Presentation.*

*Questions?*

# Appendix

# Public Policy Requirements

- On April 28, 2023, 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 15, 2023, 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 17, 2023, 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.