National Grid Local System Plan 2025

PAC Presentation

October 29th, 2025

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Purpose of Local System Plan

The Local System Plan (LSP) is a report that:

Describes:

- Non-PTF projects that are needed to maintain system reliability
- PTF project components of a locally driven project that are needed to maintain system reliability

Reflects:

- LSP Needs Assessments
- Corresponding transmission system planning and expansion studies

Identifies:

- Local Planning Process (See Appendix)
- Criteria, Data, and Assumptions (See Appendix)

Purpose:

- The LSP is developed and presented in accordance with Appendix 1 to Attachment K 'Local System Planning Process' of the Open Access Transmission Tariff (OATT). The LSP process enables formal stakeholder input to planning of the Non-PTF portion of the transmission system.

LSP Communication

National Grid's contact:

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LSP Communication Continued

- For ISO initiated projects that contain both regional and local components, the TO's LSP project is associated with the ISO-NE Regional System Plan Project list.

- For transmission asset driven projects that contain both regional and local components, the TO's LSP project is associated with the Asset Condition list.

National Grid New England's project list is located at:

https://www.nationalgridus.com/Oasis/Filings-and-Studies

"National Grid LSP Project List 2025"

LSP Project List

- The LSP Project List is a cumulative listing of proposed regulated transmission solutions that may meet LSP needs
- Lower voltage facilities contained in the LSP Project List pertain to facilities supplying our wholesale customers

The LSP Project List contains the status of each project:

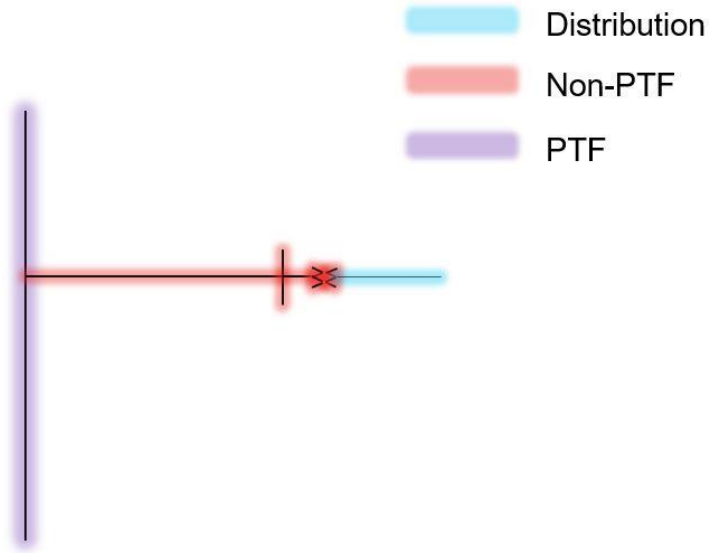
Project Status Descriptions *(may vary from RSP definitions)*	
Concept	Project is under consideration as possible solution to a need.
Proposed	National Grid has determined that the project is an appropriate solution to a need and has -25% to +50% target cost estimate accuracy/tolerance.
Planned	PPA has been approved (if required) and project has at least -25% to +25% target cost estimate accuracy/tolerance.
Under Construction	Project is under construction.
In Service	Project is complete

2025 LSP Projects

National Grid Operates Facilities in the following three states:

- Massachusetts
- New Hampshire
- Vermont

Classification of National Grid Step-Down Transformers



In Massachusetts, New Hampshire, and Vermont:

- For NEP assets, typically Distribution starts at low-side of step-down transformer

Project Summary

National Grid LSP Project Summary	
Project Type	# of Projects
Reliability	14
Asset Condition	50
Load Growth	5
Point of Delivery Request	5
Neighboring TO Request	1
Electric Sector Modernization Plan	3
DG Group Study	10
Total	74

* Some LSP projects have dual drivers

LSP Project Drivers

LSP Project Needs are determined by the following:

- Generator interconnection requests,
- DG interconnection requests,
- Requests to address load serving needs:
  - National Grid affiliate (Massachusetts Electric Company, Nantucket Electric Company),
  - Non-affiliate (e.g. Municipal customers),
  - Neighboring transmission owner requests, and
- Asset condition needs on non-PTF facilities.

LSP Projects are coordinated with affected stakeholders with the process described on the following two slides.

Local Transmission Coordination

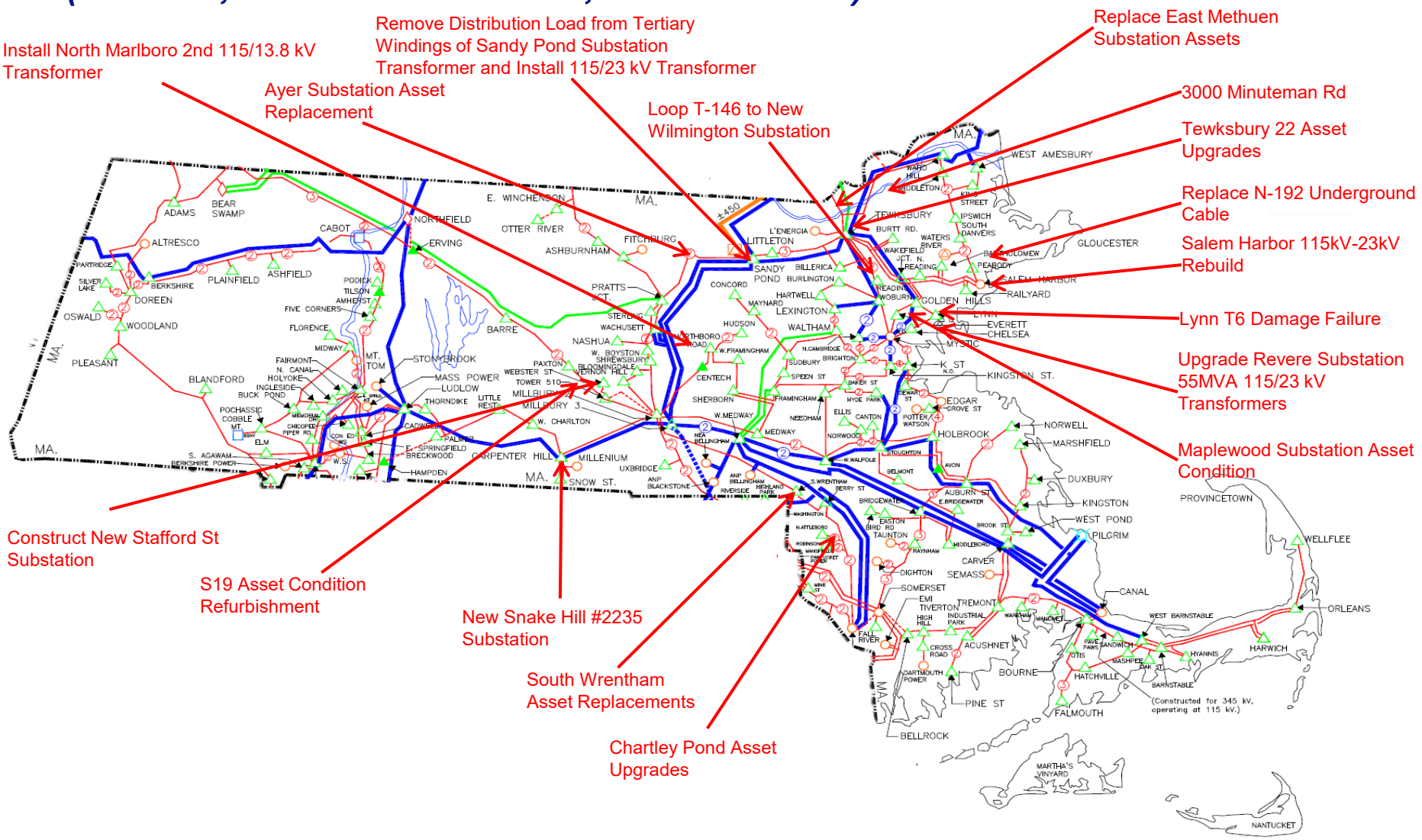
- ISO-NE Capacity, Energy, Loads, and Transmission (“CELT”) Report loads and National Grid Local System Plan projects with approved PPAs in Planned, Under Construction, and In-Service statuses are modeled in ISO-NE steady state and stability base case libraries.
- Specific details on CELT loads and project inclusion can be found in the annual Summary Document for the Transmission Planning Base Case Library.
- Local transmission studies use these cases which also include-LSP Planned projects from other NETOs as well as Planned, Under Construction, and In-Service projects in the RSP and ACL in accordance with the ISO-NE Transmission Planning Technical Guide to perform Proposed Plan Application (PPA) System Impact Studies (SIS).
- General guidance of which Transmission Projects to include in a study is provided in the ISO-NE Transmission Planning Technical Guide.
- Coordination with ISO-NE and affected NETOs is accomplished through participation in the PPA process, established in Section I.3.9 of the ISO-NE Open Access Transmission Tariff (OATT).

Local Transmission Investment Communication

- This LSP presentation is the primary National Grid local transmission investment communication for MADPU, NETOs, ISO-NE, etc.
- Local transmission investment communications to the MADPU are also accomplished through the Annual Reliability Report (ARR) and Summer Readiness Assessment.
- National Grid shares detailed information with ISO-NE in accordance with ISO-NE Planning Procedures in the form of Proposed Plan Applications including the coordination of studies required to analyze system impacts from transmission system changes, and model files to update transmission topology in study applications.
- This detailed information is shared through the Model on Demand (MOD) system, Base Case Database (BCDB), and NX-9 Facility Ratings amongst ISO-NE and NETOs.
- Communications regarding local transmission investments are also performed through ad hoc information requests.

Massachusetts Local Projects

(Planned, Under Construction, and In Service)



LSP – *Massachusetts*

(Fonts in Red are new or updates)

Primary Driver	Asset Owner by Company	2025 Projected In Service Date	Project	Status Update for 2025	Total non-PTF Project Cost for 2025 Report	Total Localized PTF Project Cost for 2025 Report	PPA Approval	RSP ID/Asset List ID	Needs Assessment	Solutions
Massachusetts										
ESMP	New England Power	Dec-34	Charlton EV Highway Charging Station	Concept	TBD		No		ESMP	Install a new 115/34.5 kV BAAH substation with 115/34.5 kV, 33/44/55 MVA transformers, 115 kV inline circuit breaker, four 34.5 kV feeders, two feeders for 2x4.8 Mvar capacitor banks. The substation will be configured for an ultimate three bays of BAAH with six 34.5 kV feeders with provision to upgrade the transformers to 45/60/75 MVA. Tap W175 Line through proposed station
ESMP	New England Power	Dec-34	Bridgewater EV Highway Charging Station	Concept	TBD		No		ESMP	Add a new greenfield substation for EV charging in Bridgewater MA. Tap E1 Line through proposed station
ESMP	New England Power	Dec-34	Westborough EV Highway Charging Station	Concept	TBD		No		ESMP	New 115kv to 34.5kv station tapping off 115kV transmission line E157. Loop the 115kV E157 into proposed station near Westboro westbound service plaza.
~~ESMP~~ Asset Condition/ Reliability	New England Power	2031	New Riverside Substation	Concept	TBD		No		~~ESMP~~ Asset condition replacement and load relief in Somerset area	Install two (2) 115/13.8kV 33/44/55MVA LTC transformers, one (1) new 13.8kV eight (8) feeder Breaker-and-a-Half (BAAH) Metal-Clad Switchgear Power Center (MCSPC). Install taps off of the T7 and S8 Lines to proposed station.
~~ESMP~~ Asset Condition/ Reliability	New England Power	2031	Mill St 912	Concept	TBD		No		~~ESMP~~ Asset condition replacement and load relief in Bridgewater area	Install two (2) 115/13.8kV 22/44/55MVA LTC transformers, one (1) new 13.8kV eight (8) feeder Breaker-and-a-Half (BAAH) Metal-Clad Switchgear Power Center (MCSPC). Loop the M1 Line through the rebuilt Station.
~~ESMP~~ Asset Condition/ Reliability	New England Power	2029	Woodchuck Hill 56 Rebuild	Concept	TBD		No		~~ESMP~~ Asset condition retirement of North Andover 7 and load relief in North Andover area	Rebuild Woodchuck Hill 115kV Yard with two 55MVA transformers and eight distribution feeders. Replace one leg of the 115kV B154N Line Loop with a tap off of the C155N Line.
~~ESMP~~ Reliability	New England Power	2034	New North Foxboro Substation	Concept	TBD		No		~~ESMP~~ Load at risk in Foxboro area	Install MCSPC with eight feeders in BAAH configuration supplied by two new 115-13.8kV 55MVA transformers. Install two overhead 115kV supplies from Mansfield and W Walpole to a transition station that feeds new 3.1 mile double-circuit 115 kV underground cable system that feeds the North Foxboro Station.
~~ESMP~~ Asset Condition/ Reliability	New England Power	2034	Perry Street 3 Expansion	Concept	TBD		No		~~ESMP~~ Asset condition and load relief in Lowell area	Rebuild Perry Street Substation 115kV Yard with 2 55MVA transformers and expand 13.2 kV yard with eight distribution feeder bays. Install new 3.56 mile single-circuit 115 kV underground cable from transition station to Perry Street
~~ESMP~~ Reliability	New England Power	2029	North Oxford Second Transformer	Concept	TBD		No		~~ESMP~~ Load at risk and load relief in Oxford area	Add a 115kV 3000A in-line vacuum circuit breaker, a 115/13.2kV - 33/44/55MVA transformer and upgrade 13.2 kV switchyard to current Low Profile Standard (LPS).

LSP – *Massachusetts*

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Massachusetts										
~~ESMP~~ Reliability	New England Power	2034	New Substation Near Southbridge	Concept	TBD		No		~~ESMP~~ Load at risk and load relief in Southbridge area	Build a new 115 to 13.2 kV substation near the Southbridge and Sturbridge border. Install two 55 MVA transformers with eight distribution feeders to support distribution load.
~~ESMP~~ Reliability	New England Power	2034	New Substation Near Webster	Concept	TBD		No		~~ESMP~~ Load at risk and load relief in Webster area	Build a new 69 to 13.2 kV substation near the Dudley and Webster border with two 55 MVA transformers will be installed, eight distribution feeders to support distribution load primarily to the west of the Company's existing East Webster substation.
~~ESMP~~ Reliability	New England Power	2034	Lenox Depot Rebuild	Concept	TBD		No		~~ESMP~~ Load relief in Southern Berkshires	Rebuild the Lennox substation to 115kV and install two 55 MVA transformers and eight distribution feeders to support the distribution loads primarily in the Lenox area.
Neighboring TO Request	New England Power	2032	New 345 kV National Grid NEMA-Boston Line (Eversource LSP entry ES-23-LSP-058)	Concept	TBD		No		Neighboring TO request to serve local load.	Build a new 345 kV line out of National Grid NEMA-Boston transmission system in support of Eversource load serving needs. (Eversource LSP entry ES-23-LSP-058)
Reliability	New England Power	Aug-30	Somerset Area Upgrades	Concept	TBD		No		Dighton substation violates distribution planning criteria of having more than 240 MWHrs outage exposure for loss of substation transformer.	Alternative 1: Build a new 115-13.8kV substation at Pottersville. (preferred) Alternative 2: Build a new 115-13.8 kV substation at Brayton Point Road Alternative 3: Install 2nd 115-13.8kV transformer at Dighton substation
Asset Condition	New England Power	Feb-32	Lynn 21 Asset Condition	Concept	TBD		No		Asset Condition	Replace existing #7 LTC with spare 115-23kV 55MVA unit with bushing CTs and associated circuit switchers. Alternative: Descope without fire barrier and online monitoring.

LSP – *Massachusetts*

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Massachusetts										
Area Reliability Assessment Asset Condition	Massachusetts Electric Company	Aug-30	King Street Substation (Northampton) and 115 kV Line	Concept	TBD		No		King Street Substation needs to be rebuilt due to Asset Conditions. Load growth is causing reliabiity issues in the Northhampton area.	Add Capacity at King Street Substation (Northampton) - New 115-13 kV Substation at King St with one transformer - New 115 kV line Midway to King Street
Asset Condition	New England Power	Jul-34	Chestnut Hill Asset Condition	Concept	TBD		No		The substation built in the 1960's is showing signs of deterioration and approaching the end of its useful life.	Preferred: Installation of a new open-air station with two 69/13.8kV transformers feeding two 13.8kV bays as well as the removal of all existing equipment at the current site Optional: Installation of a new open-air station with three 69kV breakers and two 69/13.8kV transformers feeding two 13.8kV bays as well as the removal of all existing equipment at the current site.
Asset Condition	New England Power	May-34	M-191 ACR	Concept	TBD		No		Asset Condition	Refurbish Structures, reconductor with ACSS, replace shieldwire, and all hardware
Asset Condition	New England Power	May-29	478-503/478-508 Asset Condition Refurbishment	Concept	TBD		No		Asset Condition	Repair all rust and other structure defects. Replace shieldwires with 2 OPGW. Install 795 KCMIL composite-core conductor. Replace all hardware, including insulators. Confirm correctness of structure numbering and signage, correct if necessary Alternative: Same as above with no reconductoring.
Asset Condition	New England Power	Dec-27	3512 and 3521 ACR	Concept	TBD		No		Asset Condition	Replace one wood structure and install two fiber paths.
Asset Condition	New England Power	Jul-31	Deerfield 4 ~~Short Term Asset Work~~ Asset Replacement	Proposed	$23,840,000		No		Asset Condition	Replace assets at Deerfield 4 station to address poor condition and provide improved reliability and mitigate environmental risk. Alternative 1 – Do nothing. This option was not selected because we needed to address the poor asset conditions identified at the substation. Alternative 2 – Build a new substation. There is not enough space on the existing property to construct a new substation

LSP – *Massachusetts*

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Massachusetts										
Asset Condition	New England Power	Jun-31	Billerica Asset Replacement	Concept	TBD		No		Asset Condition	Regasket transformers, replace yard assets in place, replace deteriorated underground cables, replace electromechanical relays and deteriorated relay panels, fireproof existing control enclosures, replace fence with unit to current standard, raise 23kV bus, install animal fences around distribution voltage level yard assets, install new conduits for OPGW make ready work, install online monitoring.
Asset Condition	New England Power	Aug-30	Replace/Remove Hathaway 63TR Transformer	Concept	TBD		No		The project is an asset condition driven project (transmission and distribution assets). ~~Looking~~ Plan to remove 23/13.8kV yard due to aging and inefficient use of station equipment. Poor physical condition of 23kV control house is a safety concern for workers.	Install a new 115/13.8kV 40MVA D-GrdY transformer including provisions for 3V0 protection, Install a new 13.8kV straight bus metal-clad switchgear with intertie to the existing substation switchgear, Relocate 13.8kV distribution circuits 106W81 & 106W82 to the new metal-clad switchgear, Remove 115/23kV transformer (TR63) and all 115kV associated equipment and bus, Remove Three (3) 23/13.8kV transformers (66,67,68) and all associated 23kV equipment and bus.Install a new 115/13.8kV 40MVA D-GrdY transformer including provisions for 3V0 protection,, Remove 115/23kV transformer (TR63) and all 115kV associated equipment and bus.
Asset Condition	New England Power	Dec-29	D911 Asset Condition Refurbishment	Concept	TBD		No		Asset Condition	Replace wood structures with steel. Targeted replacement of steel structures. Reconductor line and replace existing shieldwire with OPGW.
~~DG Group Study Asset~~ Condition	New England Power	2028	Shutesbury Transformer Replacement	Concept	TBD		No		~~DG Group Study Asset~~ Condition	Replace 6.75MVA Transformer 1 TRF with 40MVA. ~~Substation expansion.~~

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Massachusetts										
DG Group Study	New England Power	2028	Ware 69/13.2 kV Transformer Replacement and Transformer Addition	Proposed	$21,797,222		05/31/22		Accommodate Distributed Energy Resources	Add a new 69/13.2 kV, 24/32/40 MVA transformer with associated distribution equipment.
DG Group Study	New England Power	2028	Lashaway 69 kV Substation Rebuild Transformer Replacements	Proposed	$17,775,441		05/31/22		Accommodate Distributed Energy Resources	Rebuild existing Lashaway Substation with new 69/13.2kV Air Insulated Substation. Replace T2 (69/13.2 kV) with 24/32/40 MVA unit; replace 69 kV transformer airbreak switch with circuit switcher. Replace T1 (69/23 kV) with 69/13.2 kV 24/32/40 MVA unit; replace 69 kV transformer airbreak switch with circuit switch.
DG Group Study	New England Power	2028	Wendell Depot Transformer Addition and Replacement	Proposed	$15,214,446		05/31/22		Accommodate Distributed Energy Resources	Replace T1 with 33/44/55 MVA unit as well as add T2 (33/44/55 MVA unit) and associated distribution equipment
DG Group Study	New England Power	2028	Barre Transformer Replacements	Proposed	$13,609,429		05/31/22		Accommodate Distributed Energy Resources	Replace 115 / 13.8 kV transformers T1 and T2 with 33/44/55 MVA units
DG Group Study/ Reliability	New England Power	2028	~~East Winchendon Transformer Replacement~~ East Winchendon Second Transformer	Proposed	$10,327,000		Pending		Accommodate Distributed Energy Resources/ Load at Risk	Add a new 115 to 13.8 kV 33/44/55 MVA T2 transformer supplied by a new 115 kV transmission tap line extension from the I135 line and add four distribution feeders to support the distribution loads primarily in the Winchendon area.
Asset Condition/ Reliability	New England Power	Jun-29	J-136N East Winchendon Tap ACR	Proposed	$28,015,000		Pending		The J-136N line tap has poor asset condition. The wood H-frame structures are from 1973. Load at Risk	This project includes rebuilding the East Winchendon Tap as double circuit. The rebuilt line will follow a new, offset alignment with 795 ACSS Drake conductor and two ½" Optical Ground Wires (OPGW) will be installed
DG Group Study	New England Power	2028	Meadow Street 69 kV Breaker and Transformer Addition	Proposed	$10,074,162		05/31/22		Accommodate Distributed Energy Resources	Add a new 69/13.2 kV, 24/32/40 MVA transformer with associated distribution equipment. Install a new 69 kV circuit breaker at Meadow Street substation
DG Group Study	New England Power	2028	Royalston Transformer Replacement	Proposed	$9,788,275		05/31/22		Accommodate Distributed Energy Resources	Replace existing 69/4.16 kV with a 69/13.8 kV transformer (24/32/40 MVA) and replace associated distribution equipment.
DG Group Study	New England Power	2029	Leicester Substation Retirement	Proposed	$1,004,616		05/31/22		Accommodate Distributed Energy Resources	Retire Leicester substation after installation of Stafford St substation. Remove 69 kV taps from Lines E-5E / F-6E to station. Remove 69 / 13.8 kV transformers.

LSP – *Massachusetts*

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Massachusetts										
Asset Condition	New England Power	Nov-33	U-21 and V-22 ACR	Proposed	$511,396,000		No		~~Asset Condition~~ The U-21 and V-22 lines have poletop and cross arm decay as well as woodpecker damage along the entire length of the lines. Lines have experienced tree contacts and lightning strikes requiring addition of shield wire.	Rebuild U21 and V22 lines to 115kV standards. Replace all 594 wood structures with 115 kV standard steel structures, reconductor both U-21 and V-22 lines and install OPGW. Alternative 1: Full re-build of both lines to 69kV standards, all structures would be removed and replaced with steel, OPGW installed. This option is expected to cost 4% less than the proposed solution, it will not be able to address future load growth in the area and increased capacity per the 2050 Load Study. Alternative 2: Only replace the structures that need immediate replacement (Rolling replacement). This option was not selected as this would put significant risk on reliability of the line with an increasing rate of wood structure asset damage year-over-year. The duration and cost would be negatively impacted this approach. Alternative 3: Full re-build of both lines to 115kV standards with advanced conductors. Composite/carbon core conductors did not reduce structure heights/quantities adding to project cost.
Asset Condition	New England Power	May-32	T-20 Asset Condition Refurbishment	Proposed	$66,548,000		No		~~Asset Condition~~ The T-20 line has pole top and cross arm decay, woodpecker damage, and insulator damage/flashover. Lines have experienced tree contacts and lightning strikes.	Rebuild T20 line to 115kV standard with steel structures and OPGW. Alternative: Build to 69kV spec. This option does not allow for future load growth.
Asset Condition	Massachusetts Electric Company	Apr-28	U-173 & W-123 Asset Condition Refurbishment	Proposed	$22,800,000		NR		~~Asset Condition~~ The U-173 and W-123 lines have pole top and cross arm decay and woodpecker damage. Lines have experienced tree contacts and a lightning strike. Shield wire is from 1975.	Replace all wood pole structures with steel pole structures. Install OPGW on the U173 and W123 from Carpenter Hill to Snow Street including a termination at Millennium. Alternative: Reconductor U173 and W123 lines. Not selected due to additional cost.
Asset Condition	New England Power	Aug-30	B-69 Asset Condition Refurbishment	Proposed	$33,117,000		No		~~Asset Condition~~ The B-69 line has poletop and cross arm decay, woodpecker damage, and insulator damage/flashover. B-69 has no shieldwire.	Full line rebuild to 115kV spec. Replace wood poles with steel structures, install OPGW, and reconductor line. Alternative: Full line rebuild to 69kV spec. Replace wood poles with steel structures, install OPGW, and reconductor line. This option is not preferred due to its limited capacity considering the 115kV upgrades currently in progress on the E5 and F6 lines.

LSP – *Massachusetts*

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Massachusetts										
Asset Condition	New England Power	Feb-31	~~Replace~~ Ward Hill Asset Replacements	Proposed	$29,233,306		No		Various Asset Condition issues at Ward Hill Substation. Originally driven by ARP Breaker Replacement program but expanded in scope due to GCB failures not originally covered.	Ward Hill asset replacement: Purchase and install of a new 115 – 13.2kV 33/44/55 MVA transformer. Addition of Substation Monitoring for all Transmission owned transformers, circuit breakers, batteries, and backup generators. Replacement of 23kV yard assets Alternative 1: Rebuild Modular Feeders In Place - Not selected due to feasibility and reliability concerns. Alternative 2: Defer Associated D-Line Work - Not selected due to the 43L8 feeder is projected to exceed the Distribution Planning Criteria loading threshold in 2025 (91% of summer normal rating) Alternative 3: Retire Existing 23kV - Not selected due to the 23kV system is tied to the Liberty (NH) system and supplies multiple substations in both MA and NH. Alternative 4: Do Nothing: not recommended due to asset condition issues with both the 13kV and 23kV equipment.
Load Growth	New England Power	Apr-32	New Greenfield Pembroke Substation	Proposed	$27,216,838		No		Load growth in the Hanover area around the following 115 kV stations: North Abington, Phillips Lane, Plymouth St, and Water St.	Install a second 115/13.8 kV transformer at Plymouth St and replace existing 25/33/42 MVA transformer with new 33/44/55 MVA transformer and construct a new one transformer substation at Pembroke tapping off of 191 115 kV circuit.
Load Growth	New England Power	Mar-31	Replace Mink Street T1 & T2 Transformers	Proposed	$7,867,000		No		Addresses the existing summer normal and emergency loading problems of T2 transformer & summer emergency loading problems of T1 transformer at Mink Street substation.	Replace the Mink St. #7 T1 and T2 transformers with 24/32/40 MVA, 115/13.2 kV units. Alternative 1: Replace T1 with a larger unit to address loading issues. Not selected due to cost. Alternative 1: Place a series reactor in serires with the T1 or 13.8kV circuits. Not selected due to not enough space and did not address loading issues.
Asset Condition	New England Power	Aug-31	Relocate Adams Substation 23kV	Proposed	$30,257,306		No		Substation failures due to repeated flooding events.	Moving transmission and distribution assets at the Adams substation to a different location outside of floodplain. Remove Old T-Sub assets after substation relocation. Alternative 1-3: Split yard AIS-/Combined Yard GIS - Rebuild Adams 21 at proposed site; Reconfigure E131, F132, Q117 and J10 lines with underbuilt sub-transmission lines. This option was not chosen due future reliability and access to T-line structures. Alternative 2: Build new substation on a site west side of the river. The structure design would be costly and difficult due to the deteriorating soil stability and expanding flood zone in the area where the structures are located. It is desired to have the station on the east side of the river, not feasible.

LSP – *Massachusetts*

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Massachusetts										
Asset Condition	New England Power	Feb-29	Palmer Asset Upgrades	Proposed	$21,600,000		No	-	Asset Condition Replace deteriorating assets within Palmer substation. Initial construction of this substation began in 1959 with much of the equipment still original.	Replace ~~one the #2, #5, and #6~~ 115kV transformer~~s~~. Replace five 115kV motorized air-breaks with circuit switchers. Replace twenty-five 115kV, nine 69kV and thirteen 23kV relays. Replace five 23kV circuit breakers. Replace twenty-five 23kV disconnects. Replace three 23kV CTs and three 23kV PTs. Install substation online monitoring. Alternative 1: incorporated all the asset replacement scope but did not include substation security upgrades or online monitoring. This option did not take advantage of modernization opportunities and therefore was not selected. Alternative 2: provided an alternative scope to only replace assets at the 23kV voltage level without addressing any of the 115kV or 69kV assets condition issues. This option did not address any of the asset conditions identified and did not provide modernization opportunities and therefore was not selected.
Asset Condition	New England Power	Feb-28	B-154N/C-155N King St Tap ~~Refurbishment~~ ACR	Proposed	$27,746,000		No		Both the B-154N and C-155N line taps to King St have structures with extensive woodpecker damage, pole top rot, cracked crossarms, splitting poles, and other forms of decay.	Replace existing wood structures. Replace switches, reconductor, and install OPGW on the B-154 and C-155 lines King Street Tap section. Alternative: Do nothing. This option does not address asset condition issues.
Asset Condition	New England Power	Apr-28	Water St. Sub #910 (Hanover, MA) Asset Replacements	Proposed	$18,194,624		07/19/23		Asset condition. Water St. 115-13.8kV 33 MVA transformer is leaking and has aged insulation. Repair does not stop it.	Replace 115kV/13.8kV 40MVA transformer with 55MVA, high-side circuit switcher. Replace 115kV line assets and install conductor west location. Alternative: Do nothing. Not reccomended due to existing asset condidiotn issues may lead to catastrophic failure.
Asset Condition	New England Power	Dec-27	Dunstable Asset Replacement	Proposed	$10,936,000		No		~~Asset Condition~~ Existing T1 analysis indicates internal faults and insulation deterioration. Motorized air breaks, CCVTs (rusted and leaking), and surge arrestors are obsolete. The control enclosure is congested and has obsolete electromechanical relays.	Rebuild substation in existing footprint with a new control house built in an expanded substation footprint. Alternative: Rebuild with dual ratio transformer. Not slected because Dunstable has no plan to be upgraded to115kV.
Asset Condition	New England Power	Aug-27	L-164 Reconductoring	Proposed	$9,298,000		No		Wood structures have asset condition issues. Conductor and sieldwire are original from 1964.	Replace 12 wood structures with steel. Reconductor 1-mile wth 795 ACSS. Install 1.5 miles of OPGW. Install 1 mile of shield wire. Alternative: Do nothing. Not selected. Does not address poor asset condition issues.

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Primary Driver	Asset Owner by Company	2025 Projected In Service Date	Project	Status Update for 2025	Total non-PTF Project Cost for 2025 Report	Total Localized PTF Project Cost for 2025 Report	PPA Approval	RSP ID/Asset List ID	Needs Assessment	Solutions
Massachusetts										
Asset Condition	New England Power	Sep-30	Refurbish H-160/N-166 Lines ACR	Proposed	$8,404,252		NR		Asset Condition and reliability of shielding, insulators, and OPGW	Refurbishment Project Options Targeted: replace older wood strs, all insulators older than 2006 removal of polymer Alternative 1 Larger scope: replace all wood structures to improve shielding angle possibly display replacements as a table to show more options OPGW to be included pending investigation for either option Alternative 2 Full rebuild to investigate going to 10 bell insulation for entire circuit on both sides If going to toughened glass then worth it to not leave porcelain in the air and might eliminate lowest option.
Load Growth	New England Power	Feb-32	Plymouth St Substation Expansion	Proposed	$5,012,000		No		Load growth in the Hanover area around the following 115 kV stations: North Abington, Phillips Lane, Plymouth St, and Water St.	Install a second 115/13.8 kV transformer at Plymouth St and replace existing 25/33/42 MVA transformer with new 33/44/55 MVA transformer
Point of Delivery Request from Customer	New England Power	Sep-26	Taunton County Street Station	Proposed	$4,934,179 (Reimbursed)		No		Point of deliver request from customer	Taunton Municipal Light Plant (TMLP), is building a new substation on County Street in Taunton, MA. Install eleven (11) transmission line structures and switches on the V5, U6 and S8 lines in order to interconnect the proposed County Street Substation. Switches are required on either side of the line taps on the S8 and U6 circuits as well as on each tap line.
Reliability	New England Power	2029	Thorndike Second Transformer	Proposed	TBD		Pending		Load at Risk and system capacity issues.	~~Add an in-line breaker and install a second 115/13.2 55 MVA transformer. Build out 8 feederd with tie breakers.~~ Alternative 1. Add 24/32/40 MVA – 115/13.2 kV transformer No. 1 and install one new 523L3 feeder position - 1992 Low Profile (LP) Standard. Alternative 2. Add 24/32/40 MVA – 115/13.2 kV transformer No. 1, install one new 523L3 feeder position replace all breakers and add new control enclosure - Current LP Standard.
Asset Condition	New England Power	Aug-29	Otter River Asset Replacements	Proposed	$1,263,830		No		~~Asset Condition~~ GCBs have asset condition issues. CCVTs are original. Transmission lines and switches are old with deteriorated wooden structures.	The project consists of substation and line asset replacements at the Otter River Substation (Otter River No.615 Substation). The substation will be rebuilt to support an ultimate configuration of a three bay (breaker-and-a-half) arrangement built to 115kV clearances with the installation of two VCB's (Vacuum Circuit Breaker), and the relocation of the Templeton Taps to inside the substation. The transmission line scope is to route the A1 B2 lines to the new substation and install new conductor and Optical Ground Wire (OPGW). Alternative: Replace assets in place at current 69kV spacing, install new control enclosure, modify t-lines due to expanded fence line, and replace deteriorated switches. This option was not selected due to the 69kV capacity limiting future growth

LSP – *Massachusetts*

(Fonts in Red are new or updates)

Primary Driver	Asset Owner by Company	2025 Projected In Service Date	Project	Status Update for 2025	Total non-PTF Project Cost for 2025 Report	Total Localized PTF Project Cost for 2025 Report	PPA Approval	RSP ID/Asset List ID	Needs Assessment	Solutions
Massachusetts										
Point of Delivery Request from Customer	New England Power	Jun-28	New Snake Hill #2235 Substation	Planned	$31,840,000		09/20/23		Services upgrade request from Amazon Charlton	Build a 115/13.2kV substation served by one 33/44/55 MVA transformer tapped from the U-175 line to serve area load via a single feeder. Alternative 1: Do Nothing – This is a customer request so doing nothing is not an option. Alternative 2: Expand West Charlton Substation - The West Charlton substation does not have enough capacity to serve the Customer's requested load, nor does it have the room for expansion. Expanding the substation would also not meet customer's requested load date. Alternative 3: Expand Carpenter Hill Substation – Expansion of Carpenter Hill Substation to serve a distribution feeder arrangement is not feasible due to environmental wetlands, grading challenges and future potential 345kV expansion at Carpenter Hill. Alternative 4: Tapping the W123 line instead of the U173 as the initial tap to feed the station was investigated. It was determined that tapping the U173 first as part of this project was better due to system topology and limited outage availability on the W123.
Asset Condition	New England Power	Sep-28	South Wrentham Asset Replacements	Planned	$29,464,345	$1,068,655	05/06/22		Asset Condition inspection identified several issues targeted for mitigation.	Replace the #1, #2 and #7 Transformers. Refurbish the 8229 GCB (unless a higher interrupting kA is required). Replace the 129-3 and 182-3 gang operated disconnects. Replace the C-129S, D-182N and C-181N CCVTs. Install a new control enclosure to IEC61850 standards. Install and connect OPGW from the existing fiber on the C181N line. Install substation online monitoring. Alternative to leave #7 transformer and replace at later date. Not selected due to the cost of future replacement of T7 higher than selected option.
Point of delivery request from customer	New England Power	Nov-26	T-146 Loop to New Wilmington Substation	Planned	$7,920,000 (Reimbursed)		11/17/23		Load growth in RMLD	Install 115kV structures to loop in the T-146 and install conductor and terminal structures. Install underbuilt ADSS from 339-line structure 46 to the proposed Wilmington Substation. Alternative: Do nothing. Not selected because RMLD must have a point of interconnection to be able to provide load to the proposed substation.

LSP – *Massachusetts*

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Massachusetts										
Asset Condition	New England Power	Apr-26	Replace N-192 Underground Cable	Under Construction	$121,160,000		03/24/20		The N-192 is a 3.6-mile underground cable with a 0.5-mile submarine section installed in 1970. The N-192 has reached its end of life based on a condition assessment performed which highlights increased oil leaks and outage durations.	A project has been initiated to replace and relocate the 115 kV underground cable system. The cable system will be replaced with a solid dielectric cable system (which does not contain any fluid and require less maintenance) between the North River Terminal and the East Beverly substation.
In-Service Date change (+12 months) due to construction delays (additional ledge removal and unanticipated field issues)										
Asset Condition	New England Power	Jan-28	Salem Harbor - 115kV - 23kV Rebuild	Under Construction	$87,013,000		08/21/25	40	Asset Condition replacement at Salem Harbor substation based on testing and trouble history	Replace nine single-phase GSU transformers with two new three-phase 45/60/75 MVA 115-23 kV transformers. Replace the existing 23 kV modular station with a new breaker-and-a-half design and metalclad switchgear building. Online monitoring will be installed on the new transformers and the existing 115kV breakers. Install restroom. Alternative 1: Leave as is. Not reccomended due to current asset condition, safety, reliability, and environmental concerns. Alternative 2: Replace existing assets in place. Not reccomended due to constructability, clearance, outage, and safety concerns. Alternative 3: Replace transforers ad install new 23kV low profile station. Not reccomended due to space constraing issues not allowing for open air station installation.
In-Service Date change (+6 months) due to equipment led time increases and bathroom addition. Cost change (+67%) due to much higher material cost increases from last estimate and scope change to add bathroom due to new state regulations.										
Asset Condition	New England Power	Dec-27	Ayer Substation Asset Replacement	Under Construction	$54,444,680		11/15/23		Asset condition issues with majority of assets in the control house with limited space.	Replace 115kV and 69kV assets, add substation monitoring for transmission and distribution equipment, make substation BPS & OPGW ready, Build a new control house. Alternative 1: Replace 115kV and 69kV assets, add substation monitoring for transmission and distribution equipment, make substation BPS ready, expand existing control house. Not chosen due to lack of space around control house. Alternative 2: Build a new 115/13.2kV substation with substation monitoring and BPS and OPGW ready. Build new control house. Not because of extended timeframes and increased costs due to land procurement, permitting, and rerouting overhead lines.

LSP – *Massachusetts*

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Massachusetts										
Asset Condition	New England Power	May-26	S-19 Asset Condition Refurbishment	Under Construction	$32,320,000		NR		Asset Condition of wood poles on the S-19 line manufactured before 1980.	Targeted Refurbishment of S19 line. Additional structure replacements found during Construction Planning walkdown. Alternative: Full S19 Rebuild at 115kV with OPGW. Replace all structures will steel structures at 115kV standard. Reconductor install OPGW. This was not chosen because it required environmental siting and major permits that had major impacts to the project schedule.
		Cost change (+149%) due to scope change								
Load Growth	New England Power	Jun-26	3000 Minuteman Rd Project	Under Construction	$19,838,000		No		Customer load growth at the West Andover Substation	Replace existing 30/40/50 MVA, 115/34.5/13.8 kV Delta-Wye-Wye transformers and install two 45/60/75 MVA, 115/34.5/13.8kV Delta-Wye-Wye transformers with LTCs and online monitoring equipment. Replace the existing 115kV circuit switches, 34.5kV airbreak switches and 13.8kV cable riser structures. brake switches and new 13.8kV cable riser structures. Install one (1) 34.5 kV breaker and a half bay B with one (1) feeder positions. Alternative 1. Add a third transformer to the West Andover substation. This alternative was not selected due to lack of space at the substation and land right issues. Alternative 2. Do Nothing - The West Andover substation does not have enough capacity to serve the Customer's requested load.
Asset Condition	New England Power	Oct-26	Upgrade Revere Substation 55 MVA 115/23 kV Transformers	Under Construction	$18,685,678		03/15/23		The 115/23 kV transformers need replacement due to asset conditions.	Upgrade of the Revere 7 T3 and T4 115-23 kV transformers to 55MVA. Install online monitoring on the new 3T and 4T transformers, 115kV circuit breakers (CB), and substation battery. Make OPGW ready. Alternative: Do nothing. The T3 and T4 have asset condition issues and loading concerns when the other is out of service. Not reccomended.
Asset Condition	New England Power	Aug-27	Chartley Pond Asset Upgrades	Under Construction	$19,400,000		No		Asset condition issues of the 115kV, 23kV, and 13.2kV assets at Chartley Pond substation originally built in 1967.	Install a new 115kV CCVT, wave-trap and OPGW make-ready on the C181 line to support the Directory 1 effort. Temporary relays to be installed in the existing control house to meet NPCC Directory 1 deadline of 9/2025. Replace the existing (C181) oil circuit breaker and disconnects with a new 115kV VCB and disconnects. A new conventional control enclosure will be installed (together with dual high speed protection relays) to support the replacement of the transmission relaying and controls. Replace the 115kV surge arresters on the No. 2 transformer. Replace the existing stand-by generator. Extend the substation yard and security perimeter fence to the East. Alternative: Perform the above and install IEC6185 Control house. This option not selected due to this will complicate 23kV additions in the future.

LSP – *Massachusetts*

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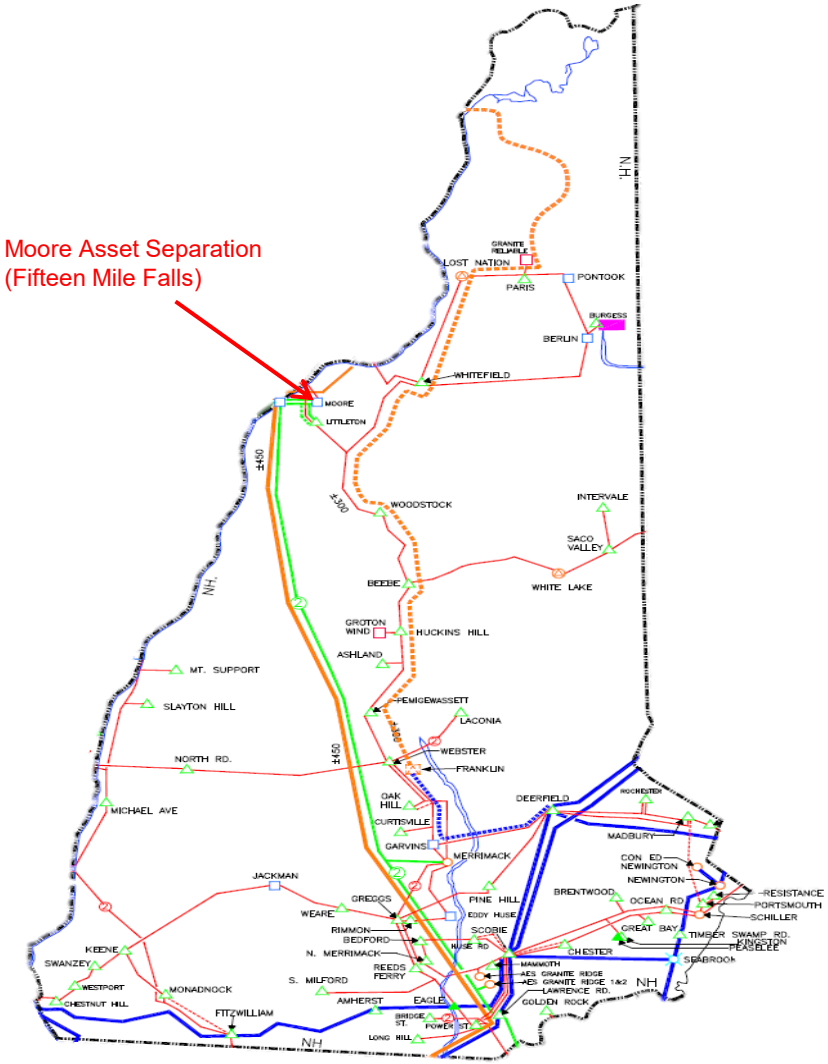
Massachusetts										
Asset Condition	New England Power	Aug-26	Maplewood Substation Asset Condition NPCC Directory 1 Phase 5 (ACL 94)	Under Construction	$13,089,050		10/24/23	354	Asset condition and upgrade of control house due to space constraints. T4 has oil leaks and frequiently overloaded. NPCC Directory Phase 5	Replace #4 transformer with a 55MVA transformer. Upgrade control house to IEC61850 standard with online monitoring and NERC CIP security. Upgrade T3 and T4 relaying with the F-158N NPCC Directory 1 Phase 5 upgrade.
		In-Service Date change (+10 months) due to permitting issues and outage scheduling Cost change (-13%) due to updated cost estimates								
Load Growth	New England Power	Dec-25	Install North Marlboro 2nd 115/13.8 kV Transformer	Under Construction	$9,451,000		11/10/20		Driven by local needs to accommodate load growth in the Marlboro area.	Tap H-160 and install 2nd 40MVA 115/13.8kV transformer T2 at N Marlboro #318 Substation Alternative 1: Build a new substation off the H-160 line with two new feeders and a 115/13.8kV 40 MVA transformer. Not selected due to higher cost and not addressing load at risk. Alternative 2: Install a battery with 368 MWh capacity to match the load at risk benefit of expanding the Marlboro substation. Option not selected due to higher cost. Alternative 3: De-scoping portions of the project were reviewed, and it was confirmed that there are no elements of the proposed design that can be removed/eliminated and still provide a solution that would satisfy project criteria.
Asset Condition	New England Power	Jun-29	Tewksbury 22 Asset Upgrades	Under Construction	$4,640,000		12/19/23	336	Asset condition issues of the 230kV, 115kV, and 13.8kV assets at Tewksbury 22 substation originally built in 1957.	Asset replacement for end-of-life equipment in 230kV, 115kV, and 13.8kV assets. Install OPGW on the M-139, N-140, and J-162 115kV lines Make station OPGW ready to support NPCC Directory 1 relay projects. Replace bank 3 transformer and refurbish bank 2. Install online monitoring for transmission assets. Alternative: Do nothing. Original disconnect switches and brown glass insulators are prone to breaking and bank 3 transformer is leaking. This option not selected.
		Cost change (+697%) due to updated cost estimates								
Asset Condition	New England Power	Mar-26	Lynn T6 Replacement (Damage Failure)	Under Construction	$2,900,000		NR		Asset condition due to unplanned damage failure	Replace the T6 transformer at Lynn due to damage failure. Alternative considered: Do nothing. Not selected due to equipment is past end of life.
		Small date change, First reported cost								

New Hampshire Local Projects

(Planned, Under Construction, and In Service)



LSP – *New Hampshire*

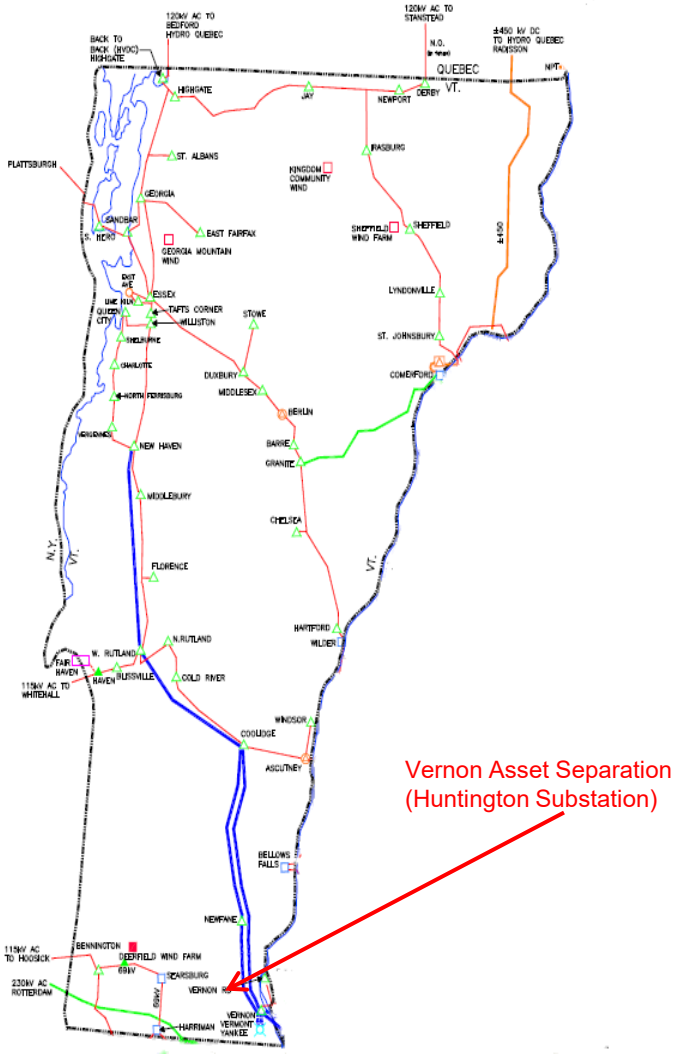
(Fonts in Red are new or updates)

Primary Driver	Asset Owner by Company	2025 Projected In Service Date	Project	Status Update for 2025	Total non-PTF Project Cost for 2025 Report	Total Localized PTF Project Cost for 2025 Report	PPA Approval	RSP ID/Asset List ID	Needs Assessment	Solutions
New Hampshire										
Asset Condition	New England Power	Mar-32	Monroe 15 Asset Replacement	Concept	TBD		No		Asset Condition	Replace/upgrade transformer.
Asset Condition	New England Power	Oct-28	Monroe AC Terminal Online Monitoring	Concept	TBD		No		Asset Condition	Replace capacitor bank and address other minor asset condition issues.
Asset Condition	New England Power	Nov-27	3386 ACR	Proposed	$9,970,000		No		Line 3386 has assset condition issues and was built in the 1940's.	Targeted Rebuild: Replace 15 wood structures with steel structures. Replace mainline and DC tap of shieldwire with OPGW and reconductor (.4 miles). Alternative: Full line rebuild.
Asset Condition	New England Power	Aug-29	Moore Asset Separation (Fifteen Mile Falls)	Planned	$32,302,350		12/14/22	308	Asset Separation from Great River Hydro due to shared control house being at max capacity.	Building a new Fifteen Mile Falls substation and decomissioning the existing Moore No. 20 assets, separating assets from Great River Hydro. New control house and substation monitoring. Alternative 1: Maintain the existing one-line configuration in the existing switch yard and build a new control house on GRH property for National Grid assets. - This option was not selected because it doesn't meet the criteria laid out during de-regulation to separate our assets from those of GRH. Alternative 2: Leave as is. - This option is not selected because the poor existing asset needs immediate attention.

Cost change (+10%) due to damage from Summer and Fall 2024 storms, engineering standards change, enclosing staging shed, and inflation.

Vermont Local Projects

(Planned, Under Construction, and In Service)



Vernon Asset Separation
(Huntington Substation)

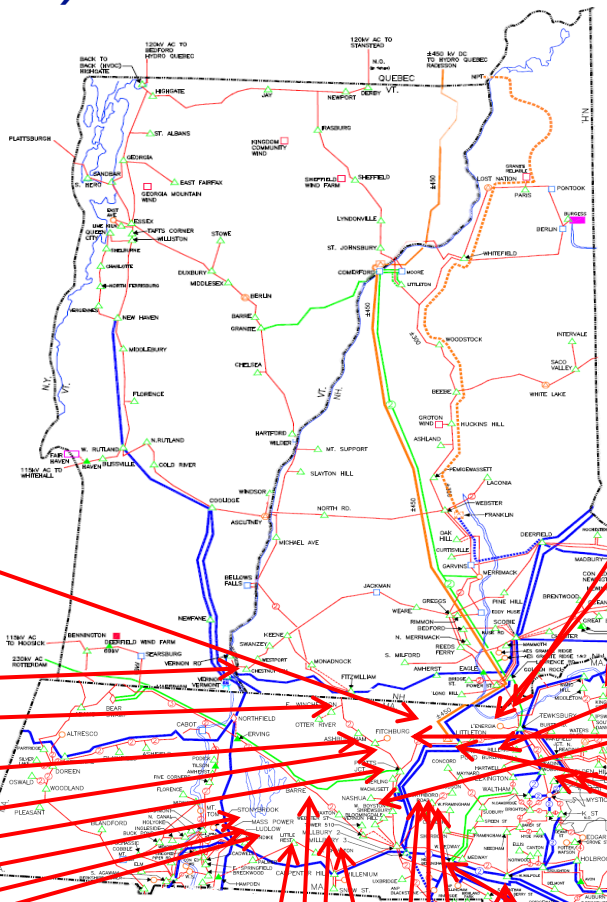
LSP – *Vermont*

(Fonts in Red are new or updates)

Primary Driver	Asset Owner by Company	2025 Projected In Service Date	Project	Status Update for 2025	Total non-PTF Project Cost for 2025 Report	Total Localized PTF Project Cost for 2025 Report	PPA Approval	RSP ID/Asset List ID	Needs Assessment	Solutions
Vermont										
Asset Condition	New England Power	Apr-29	Gilman Hydro Switch Replacements	Proposed	$4,461,000		NR		~~Asset Condition~~ Air breaks 331 and 332 have been in service since the 1950's and have a history of operational and maintenance issues.	Replace two motor operated load breaks, the towers they rest on, and fuses. Alternative: Do Nothing. Not selected as this would pose more risk for continual costly maintenance needs and unplanned outages.
Asset Condition	New England Power	Aug-29	Wilder Asset Separation	Proposed	$45,498,902		No		Asset separation from Great River Hydro at Wilder Substation, VT due to shared control house, asset condition issues, and being at max capacity.	Rebuild 13.8kV and 46kV yard equipment and control house at a new location. Transfer ownership of the T3 and associated equipment to GRH. Install new 115kV tap, transformers, and move distribution feeders and Reconfigure K26, 1344, 1303, and 1304 for Proposed Substation Interconnection
Asset Condition	New England Power	Dec-30	Vilas Bridge 34 Asset Replacement	Proposed	$26,190,000		No		~~Asset Condition~~ Vilas Bridge was built in the 1960s and has asset condition issues.	Replace yard assets in place, add new control house with upgraded 3v0 protection, replace fence with unit to current standard, install new retaining wall around the north and east sides of the station, replace deteriorated 12L1 structures outside the station.
		First reported cost								
Asset Condition	New England Power	Mar-28	Vernon Asset Separation (Huntington Substation)	Planned	$6,853,000		07/20/22	~~235~~	Asset Separation	Building a new Huntington substation and decomissioning the existing NEP Vernon assets, separating assets from GRH.
		Cost change (-27%) due to updated cost estimates								

Local System Plan Projects Removed from List

(Cancelled and In Service)



Replace East Methuen Assets

Grafton St Rebuild

West Amesbury Second Transformer

Groton St Rebuild

South Billerica Rebuild

Chariot Solar QP727

New Substation near Greendale

East Winchendon Transformer Replacement

Laurel Circle Second Transformer

East Westminster Rebuild

Remove Distribution Load from Tertiary Windings of Sandy Pond Substation Transformer and Install 115/23 kV Transformer

Westminster Second Transformer

Pratts Junction Rebuild

New Substation Near Saugus

Wilbraham Second Transformer

Belmont Second Transformer

West Hampden Second Transformer

New Substation Near South Weymouth

Palmer Second Transformer

Norwell Substation Upgrades

Little Rest Rd 2nd Xfmr

New Substation Near Brockton and West Bridgewater

Ware Substation In-Line Breaker

Construct New Stafford St Substation

West Charlton

North Grafton Second Transformer

New Substation Near Grand Army

New Substation Near Grafton

New Substation Near Northbridge and Uxbridge

Pondville Rebuild

Prysmian Cust conn at 115kV Bus 1

LSP – *Removed From List*

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Primary Driver	Asset Owner by Company	2025 Projected In Service Date	Project	Status Update for 2025	Total non-PTF Project Cost for 2025 Report	Total Localized PTF Project Cost for 2025 Report	PPA Approval	RSP ID/Asset List ID	Needs Assessment	Solutions
Removed from 2025 Local System Plan										
Asset Condition	New England Power	Aug-31	Adams Transmission Substation Removal	Cancelled	$5,089,235		No		Asset Condition	Remove Old T-Sub assets after substation relocation.
DG Group Study	New England Power	2028	East Winchendon Transformer Replacement	Cancelled	$9,626,762		05/31/22		Accommodate Distributed Energy Resources	Replace T1 (115/13.8 kV) with a 33/44/55 MVA unit
Point of Delivery Request from Customer	New England Power	Feb-26	QP727	Cancelled	TBD		08/26/19	1812	Generator interconnection (QP 727)	Install new ring bus substation on the N-186 line to Vernon Rd
Point of Delivery Request from Customer	New England Power	Aug-26	Customer Load connection at Brayton Point 115kV Bus 1	Cancelled	TBD		12/19/23		Interconnection Request from Customer	Build new 115kV tap from Brayton Point Bus 1 to serve customer's 115kV/13.8kV substation.
DG Group Study	New England Power	2028	Ware Substation In-Line Breaker	Cancelled		$1,688,000 Reimbursed	06/02/20		Accommodate Distributed Energy Resources	Install a new 69kV in line breaker on the O-15N. (Associated with Ware transformer LSP project)
Asset Condition	New England Power	Apr-25	Construct New Stafford St Substation	In-Service	$830,000		06/02/20	333	Asset Condition	Construct New 115kV /13.8kV Stafford St Substation with NPCC Directory 1 dual pilot protection.
Asset Condition	New England Power	Dec-24	Nashua St Substation Refurbishment	In-Service	$3,670,000		No	95	Asset Condition	Install 115 kV CCVT with CCVT/Wave Trap combination on O-141S line, Build a new control house with modern protection and control systems including the new IEC61850 communication standard, Replace 115 kV Gas Circuit Breaker #141, Standby Generator, and 4 wood pole masts. Install online monitoring for transmission assets.
Asset Condition	New England Power	Mar-25	Replace East Methuen Substation Assets	In-Service	$14,549,279		No		G-133 GCB showing signs of gasket failure and is obsolete. T1 and T2 transformers have asset concerns.	Replace both 115-13.2 kV 40 MVA transformers with two 115-13.2 kV 55 MVA transformers. Replace 115 kV circuit switchers, replace G-133 GCB, Install substation monitoring, and enhanced substation security. Alternative 1: Do Nothing: This option was not chosen because it does not address all known asset conditions issues supporting increased reliability. Alternative 2: Full Substation Rebuild: (requires distribution full rebuild). Not chosen due to cost. The remaining assets were replaced in 2000 and are in good condition per the 2018 Asset Condition report.

Cost change (+100%) due to cost increases of labor, equipment and materials.

LSP – *Removed From List*

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Removed from 2025 Local System Plan										
ESMP	New England Power	2032	Laurel Circle Second Transformer	Cancelled	TBD		No		ESMP	A new 115 to 13.8 kV 55 MVA transformer will be installed with four distribution feeders to support the distribution loads primarily in the Shirley area.
ESMP	New England Power	2029	Westminster Second Transformer	Cancelled	TBD		No		ESMP	Rebuild with two 33/44/55 MVA – 115/13.8 kV LTC transformers and metalclad 13.8 kV switchgear.
ESMP	New England Power	2029	East Westminster Rebuild	Cancelled	TBD		No		ESMP	Remove the existing modular substation and build a new 69/13.8kV low profile breaker-and-a-half (BAAH) substation to 115kV clearance. Relocate existing A1 and B2 Tap lines into the rebuilt station.
ESMP	New England Power	2029	Pratts Junction Rebuild	Cancelled	TBD		No		ESMP	Install a new 115/13.8 kV BAAH substation with 115/13.8 kV, 33/44/55 MVA transformers. The substation will be fed from 115kV K137W and L138W
ESMP	New England Power	2029	North Grafton Second Transformer	Cancelled	TBD		No		ESMP	Add a new 115kV inline vacuum circuit breaker, a new 115-69/13.8kV, 33/44/55MVA transformer and 13.8kV, 7.2MVAr capacitor bank.
ESMP	New England Power	2034	New Substation Near Grafton	Cancelled	TBD		No		ESMP	Install a new 115 to 13.8 kV substation near the Sutton and Grafton border with two 55 MVA transformers, eight distribution feeders to support distribution load primarily to the southeast of the Millbury Substation.
ESMP	New England Power	2034	Pondville Rebuild	Cancelled	TBD		No		ESMP	The Pondville Substation will be upgraded, supplied by 69kV, and will include two 55 MVA transformers, with eight distribution feeders to support distribution load primarily in the Auburn area.
ESMP	New England Power	2029	West Charlton	Cancelled	TBD		No		ESMP	Install a new 115/13.2kV 33/44/55MVA transformer, 115kV circuit switcher, 115kV tie breaker, associated disconnects, and expand the 13.2kV substation. Add a second tap to loop the 115kV W175 Line through the station.

LSP – *Removed From List*

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Removed from 2025 Local System Plan										
ESMP	New England Power	2034	New Substation Near Greendale	Cancelled	TBD		No		ESMP	Build a new 115 to 13.8 kV substation in the northern part of Worcester with two 55 MVA transformers and eight distribution feeders to support distribution load primarily to the south of the Company's existing Greendale substation. This includes supporting the retirement and conversion of existing 4 kV substations in the area.
ESMP	New England Power	2034	Grafton St Rebuild	Cancelled	TBD		No		ESMP	The Grafton St substation will be rebuilt and supplied by a new 115 kV transmission lines and two 55 MVA transformers installed, with eight distribution feeders to support distribution load
ESMP	New England Power	2032	Groton St Rebuild	Cancelled	TBD		No		ESMP	The existing Groton St Substation will be upgraded to 69kV and will be upgraded to include two 40 MVA transformers, with six distribution feeders
ESMP	New England Power	2032	West Amesbury Second Transformer	Cancelled	TBD		No		ESMP	Add a second 115/13.2 kV 55MVA transformer to the existing West Amesbury substation with four new distribution feeders.
ESMP	New England Power	2034	South Billerica 18 Rebuild	Cancelled	TBD		No		ESMP	Rebuild to 115kV with two 33/44/55 MVA – 115/13.8 kV LTC transformers and metalclad 13.8 kV switchgear. Station will be fed by new 3.74 mile double-circuit 115 kV underground cable system from South Billerica Station to Billerica Station
ESMP	New England Power	2034	New Substation Near Saugus	Cancelled	TBD		No		ESMP	Build a new 115 to 13.8 kV substation in Saugus with two 55 MVA transformers and eight distribution feeders that will primarily supply distribution load in the Saugus and Revere areas.
ESMP	New England Power	2034	New Substation Near Grand Army	Cancelled	TBD		No		ESMP	Build a new 115 to 13.8 kV substation near Grand Army Highway in Fall River with two 55 MVA transformers and eight distribution feeders to support the distribution load center primarily to the northeast of the existing Hathaway Substation.
ESMP	New England Power	2029	Beaver Pond Substation Upgrade	Cancelled	TBD		No		ESMP	Replace the 24/32/40 MVA transformers with units rated 33/44/55 MVA.
ESMP	New England Power	2031	New Substation Near Northbridge and Uxbridge	Cancelled	TBD		No		ESMP	Build a new 115 to 13.8 kV substation near the Northbridge and Uxbridge border with two 55 MVA transformers will be installed, with eight distribution feeders to support distribution load primarily to the northeast of the Whitins Pond Substation.

LSP – *Removed From List*

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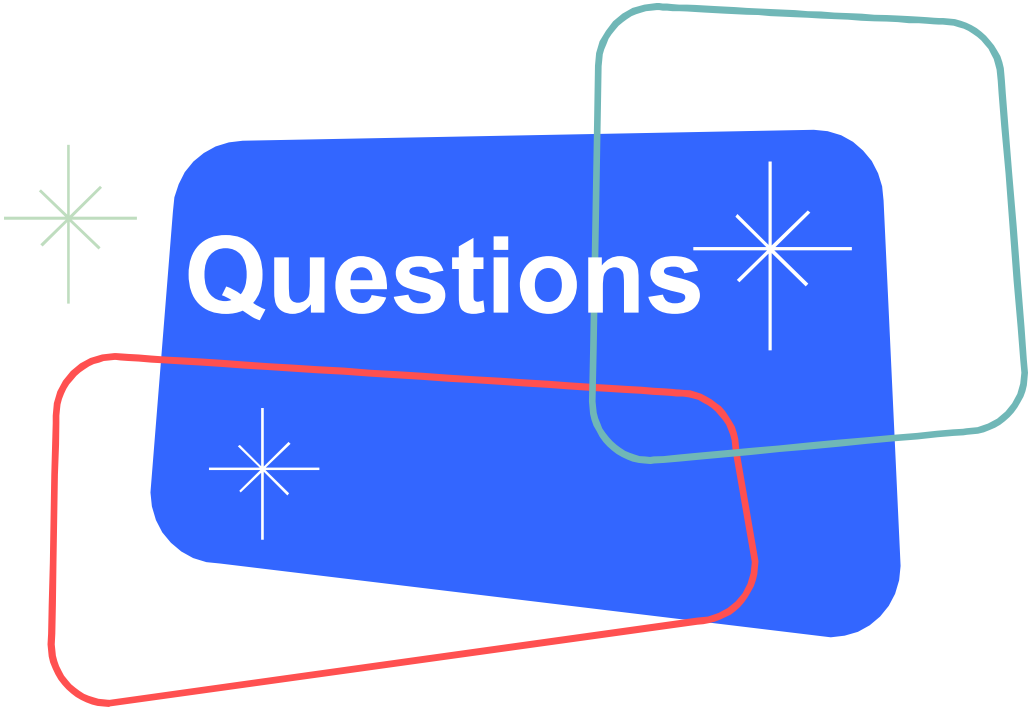
Primary Driver	Asset Owner by Company	2025 Projected In Service Date	Project	Status Update for 2025	Total non-PTF Project Cost for 2025 Report	Total Localized PTF Project Cost for 2025 Report	PPA Approval	RSP ID/Asset List ID	Needs Assessment	Solutions
Removed from 2025 Local System Plan										
ESMP	New England Power	2029	Belmont Second Transformer	Cancelled	TBD		No		ESMP	Add a 33/44/55 MVA - 115/13.8 kV LTC Transformer and a 2nd 13.8 kV Metalclad Switchgear.
ESMP	New England Power	2034	New Substation Near Brockton and West Bridgewater	Cancelled	TBD		No		ESMP	Build a new 115 to 13.8 kV substation south of the current Belmont Substation near the West Bridgewater and Brockton border with two 55 MVA transformers with eight distribution feeders to support distribution loads primarily located in the southern portion of the Brockton and Easton areas.
ESMP	New England Power	2029	Norwell Substation Upgrades	Cancelled	TBD		No		ESMP	Replace 1T with a 55MVA transformer and add two new distrbution UG feeders.
ESMP	New England Power	2034	New Substation Near South Weymouth	Cancelled	TBD		No		ESMP	Build a new 115 to 13.8 kV substation south of the current Mid Weymouth substation with two 55MVA transformers and eight distribution feeders to support distribution loads primarily located in the southern Weymouth area.
ESMP	New England Power	2032	Little Rest Road Second Transformer	Cancelled	TBD		No		ESMP	Add a new 115 to 13.2 kV 55MVA transformer to the Little Rest Rd substation.
ESMP	New England Power	2029	Palmer Second Transformer	Cancelled	TBD		No		ESMP	Install second115/13.2kV (55MVA) transformer and three new regulated feeders, total six feeder buildout. Install new distribution control enclosure.
ESMP	New England Power	2032	West Hampden Second Transformer	Cancelled	TBD		No		ESMP	A new 115 to 13.2 kV 55MVA transformer to the West Hampden substation with four distribution feeders to support the distribution loads primarily in the East Longmeadow and Hampden areas.
ESMP	New England Power	2032	Wilbraham Second Transformer	Cancelled	TBD		No		ESMP	Add a new 69 to 13.2 kV 55MVA transformer to the Wilbraham substation with four distribution feeders to support the distribution loads primarily in the Wilbraham area.

LSP Public Policy

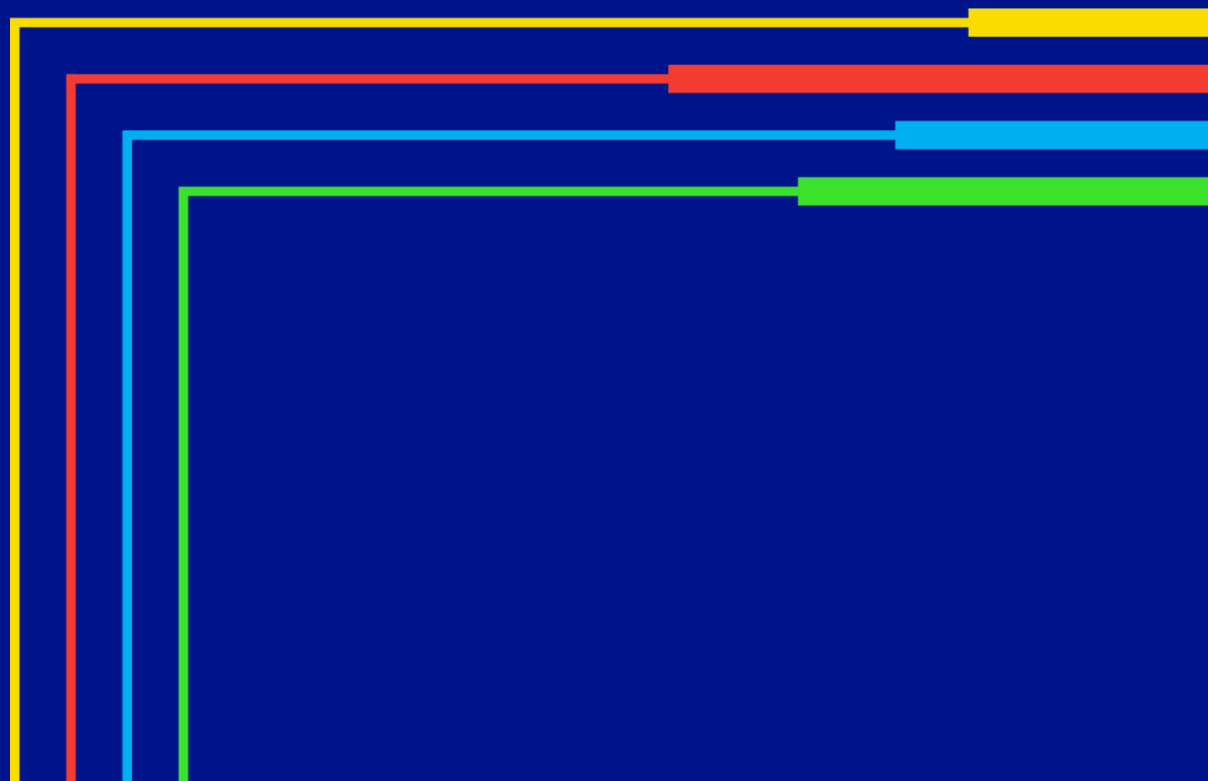
- A notice was posted to the PAC website on September 9, 2023 for input regarding state and federal Public Policy Requirements identified as driving needs on non-PTF elements and local Transmission facilities by Public Policy Requirements.
- In 2023, National Grid did not receive any input from NESCOE, stakeholders, or any state regarding public policy requirements driving a Transmission need on the non-PTF elements.
- In 2023, NESCOE communicated to ISO-NE that there were no state or federal Public Policy Requirements “driving transmission needs relating to the New England Transmission System”
- In 2023, ISO-NE communicated that it was not aware of any local Public Policy Requirements.
- Thus, National Grid determined there were no Public Policy Requirements identified in the ISO-NE PPTU that are driving needs on National Grid’s Non-PTF system.

Questions

PAC, Transmission Customers, and other Stakeholders have 30 days to provide any written comments for consideration by National Grid.



Appendix



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Criteria

All National Grid facilities that are part of the interconnected National Grid system shall be designed in accordance with the National Grid Transmission Planning Guide (TGP28)

The National Grid Transmission Planning Guide is posted on our website under:

https://www.nationalgridus.com/media/oasis/filings-and-studies/tgp28-issue-6-final_050923.pdf

"Corporate, TGP28 Issue 6 Final_050923"

Local System Planning Process

Local studies can result from:

- Load Growth
- Area Reliability Assessment
- Point of Delivery Request from Customer
- Asset Replacement

Local System Planning Process

A Planner:

- summarizes the results from the needs assessment and provides: *criteria*, *data* and *assumptions used in study*
- builds study cases with proposed alternatives
- determines the most effective solution
- summarizes the results of the solutions study

Data and Assumptions

Resources for studies:

- ISO-NE Library cases for load flow, Stability, and ASPEN short circuit studies
- CELT Report Load forecasts for NE wide loads
- Customer provided forecasted loads for local areas

Planning Procedures Supporting the OATT I.3.9 Process

- ISO-NE Planning Procedure No. 5-0 (PP5-0) “Procedure for Reporting Notice of Intent to Construct or Change Facilities in accordance with Section I.3.9 of the ISO New England Tariff (Proposed Plan Application Procedure)” ISO-NE PP5-0 states when Section I.3.9 of the ISO-NE Tariff requires reporting notice to construct or change facilities and introduces the lists the associated PP5 Planning Procedures.

- ISO-NE Planning Procedure No. 5-1 (PP5-1) “Procedure for Review of Governance Participant’s Proposed Plans (Section I.3.9 Applications: Requirements, Procedures, and Forms)” describes the detailed procedure to be followed by the appropriate Governance Participants, Committees, Subcommittees, Task Forces, and ISO-NE staff in order to comply with the provisions of Section I.3.9 of the Tariff, in particular Section 1 General - Description of the Proposed Plan Application Process.

Planning Procedures Supporting the OATT I.3.9 Process

- ISO-NE Planning Procedure No. 5-3 (PP5-3) “Guidelines for Conducting and Evaluating Proposed Plan Application Analyses” provides guidelines for conducting and evaluating Proposed Plan Application analysis for use by ISO-NE and Reliability Committee, where Section 3 deals with Generating Units and Transmission Facilities- Bulk Power System Performance.

- ISO-NE Planning Procedure No. 5-6 (PP5-6) “Interconnection Planning Procedure for Generation and Elective Transmission Upgrades” describes the scope of Interconnection Studies conducted pursuant to Schedule 22 (“Large Generator Interconnection Procedures” or “LGIP”), Schedule 23 (“Small Generator Interconnection Procedures” or “SGIP”) and Schedule 25 (“Elective Transmission Upgrade Interconnection Procedures” or “ETU IP”) of Section II of the ISO New England Transmission, Markets and Services Tariff(the “Tariff”).

OATT Schedules Supporting the OATT I.3.9 Process

- Schedule 21 “New England Power Company Local Service Schedule”, functions in conjunction with the OATT to offer Transmission Services and Ancillary Services not provided pursuant to the other sections of the OATT, and to provide for the recognition of payments by and credits to NEP under the OATT. This Schedule includes form for System Impact Study agreement, form for Facilities Study Agreement, and information to be provided by the Transmission Customer for System Impact Study.

- Schedule 22 “Large Generator Interconnection Procedures”, (LGIP) defines procedures for study processes and arrangements associated with interconnection of large generators. It also describes Interconnection Agreements, including the Large Generator Interconnection Agreement (LGIA).

- Schedule 23 “Small Generator Interconnection Procedures”, (SGIP) defines corresponding procedures for interconnection of small generators and includes the Small Generator Interconnection Agreement (SGIA) applicable to generators less than 20 MW with exceptions as provided in Schedule 23.

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