



**Transmission Owner Planning Advisory  
Committee Meeting  
Wednesday October 29, 2025**

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# **Local System Plan Presentation**

Presenter: Forrest Kugell, Lead Transmission Planning Engineer (AVANGRID)

# Purpose of Local System Plan

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Per Attachment K – Local, this LSP presentation:

- Describes projected improvements to non-PTF that are needed to maintain reliable customer service.
- Reflects:
  - LSP Needs Assessments
  - Corresponding transmission system planning studies
- LSP is communicated at the TOPAC meeting once a year.
- PAC, Transmission Customers, and other Stakeholders have 30 days to provide written comments for consideration to AVANGRID.
  - AVANGRID Contact:  
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# Avangrid LSP Communication

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- Each TO is individually responsible for publicly posting and updating the status of its respective LSP and the transmission projects list on a website in a format similar to the RSP project list
- The ISO-NE RSP project list contains links to each individual TO's transmission project list and is located at:  
[Link to ISO-NE's RSP project list](#)
- CMP's LSP project list is located at:  
[Link to CMP's LSP](#)
- UI's LSP project list is located at:  
[Link to UI's LSP](#)

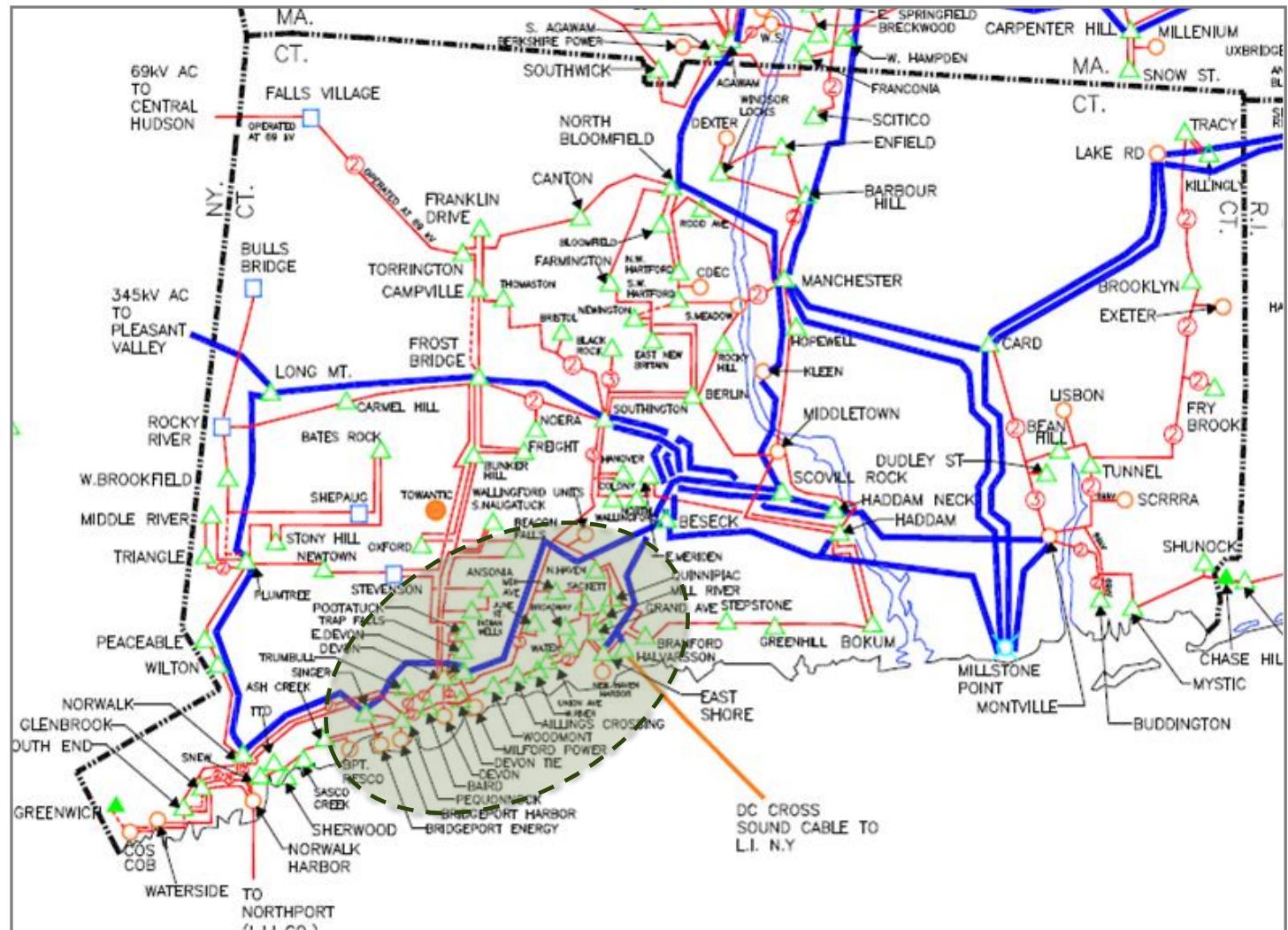
# Avangrid's Local System Planning Process

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- All Avangrid local system upgrades are determined in accordance with ***Avangrid Transmission Planning Criteria***.
- LSP needs assessments can result from:
  - Periodic Assessment of Transmission Facilities
  - Load Growth
  - Retail or Wholesale Customer Request
  - Generator Interconnection Request
  - Asset Conditions
  - Public Policy Requirements
- Any new project or major project change since the 2024 LSP presentation will be highlighted using **red** text.

# UI Local System Plan

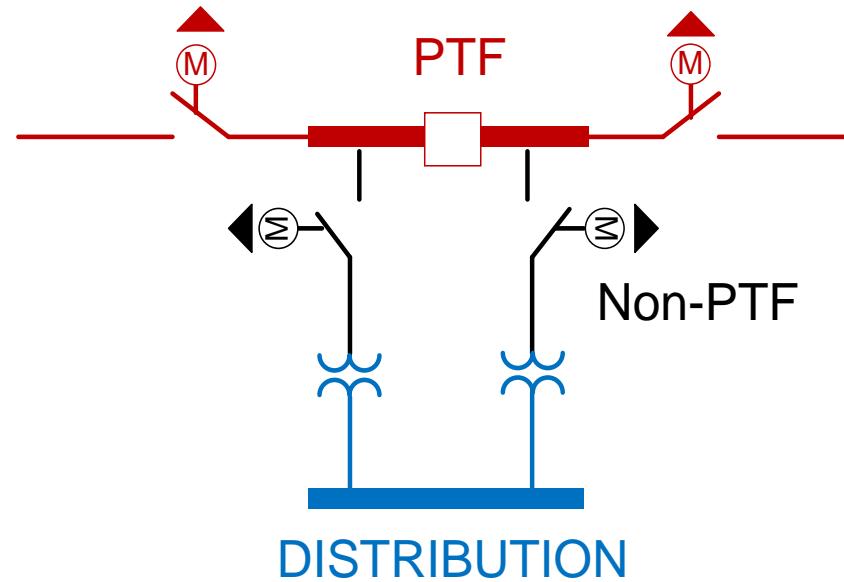
There are currently no UI projects that qualify for the LSP



# Characteristics of UI's Transmission System

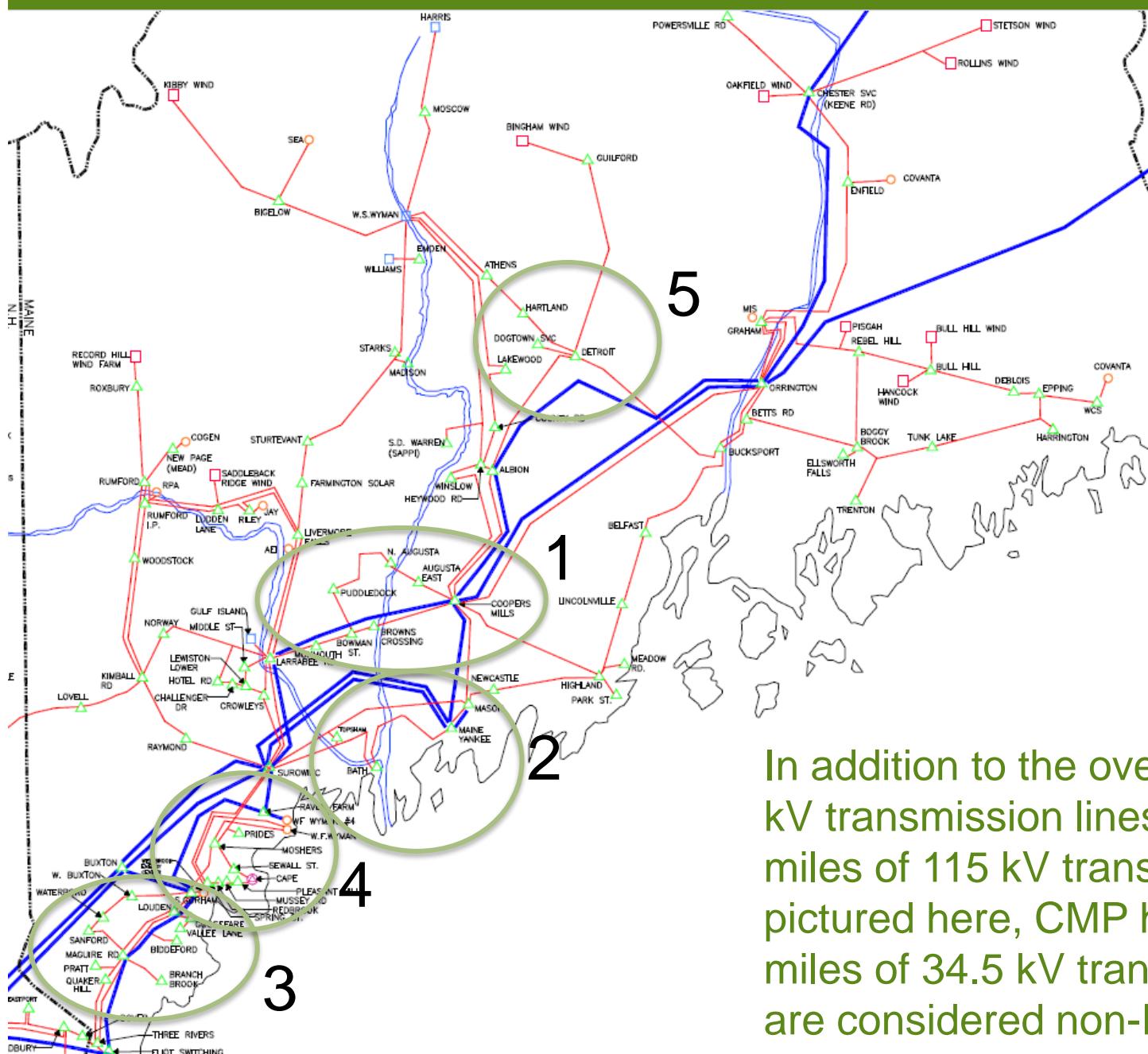
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## Typical UI 115/13.8 kV Substation



- There are no radial 115 kV transmission lines on UI's system
- Nearly all of UI's transmission facilities are classified as PTF
- The only non-PTF on UI's system are the 115 kV taps to 115/13.8 kV transformers

# CMP's Local System Plan



1. Augusta
2. Brunswick & Topsham
3. Southern
4. Greater Portland
5. Detroit

In addition to the over 500 miles of 345 kV transmission lines and over 1250 miles of 115 kV transmission lines pictured here, CMP has over 1000 miles of 34.5 kV transmission lines that are considered non-PTF.

## LSP Projects – Southern Area

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Southern Area Reliability Study	Rebuild 34.5 kV Section 110	Rebuild line with 795 ACSR from Sanford to South Sanford	N-1-1 thermal violations	2025	In Service
	Greenfield Bolt Hill Substation	Full rebuild 115kV AIS 4-BAY BAAH, 4-Line ups of 34.5kV GIS straight bus, and 2-Line ups of 15kV GIS straight bus.	Various thermal and voltage violations Asset condition, needs, Customer funded expansion	2028	Planned
		Four new 115/34.5 kV 56 MVA Transformers	Thermal and Voltage Violations	2028	Planned
		Two new 115/12.47 kV 37 MVA Transformers	Load shifts to new Bolt Hill substation	2028	Planned

## LSP Projects – Southern Area

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Southern Area Reliability Study	Greenfield Bolt Hill Substation	New 34.5 kV Section 136 and Rebuild 176 to PNSY	Customer Need	2028	Planned
		Removal of 34.5/12.47 kV Eliot Substation and move load to Bolt Hill	Distribution Reconfiguration	2028	Planned
		Re-rating 115 kV N133A and N133B	Thermal Violations	2028	Planned
		Relocate and configure 115 kV switch 133J9 as Normally Open between line sections N133A and N133B	Thermal and Voltage Violations	2028	Planned

## LSP Projects – Greater Portland Area

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Greater Portland Reliability Area Study	Raven Farms Substation	Bring 34.5kV Elm Street Substation into new 115 kV Raven Farms Substation	N-1 and N-1-1 violations	2030	Concept
		Second 115/34.5 Transformer at New Raven Farms Substation	N-1 and N-1-1 violations	2030	Concept
	East Deering Substation	New 115/34.5 kV Transformer at East Deering	N-1 and N-1-1 violations	2030	Concept
	Bayside Substation	New 115/12.47 kV Substation fed from 115 kV Raven Farms & 115 Sewall Substations	N-1 and N-1-1 violations due to load growth	2030	Concept
	Line Work	Rebuild 34.5 kV Section 180A	N-1 and N-1-1 violations	2030	Concept
	Line Work	Rebuild 34.5 kV Section 188	N-1 and N-1-1 violations	2030	Concept

# LSP Projects – Detroit Guilford Area

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Detroit Guilford Reliability Area Study	Guilford Substation	Install Two 34.5 kV 12 MVAR DRDs at Guilford Substation	High & Low Voltage	2027	Planned
	Detroit Substation	2nd 115/34.5 kV Transformer at Detroit	Thermal Violations / Voltage Violations & LOL	2026	Planned
	Sections 5 & 35	Bifurcation of 34.5 kV Sections 5 and 35	Thermal and Low Voltage Violations & LOL	2027	Planned
	Carmel Rebuild 34.5/12.47 kV	Rebuild Carmel and add 16 MVAR of DRD at 34.5 kV	Increased load / Voltage Violations	2029	Planned

# LSP Projects – Asset Condition

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Asset Condition	Great Falls 34.5 kV Substation	Partial Rebuild of Great Falls Substation	Asset condition, reliability, and maintenance concerns	Q4 2025	Under Construction
	Butlers Corner 34.5 kV Substation	Partial Rebuild of Butlers Corner Substation	Asset condition, and several safety concerns	2026	Planned
	Deer Rips 34.5 kV Substation	Greenfield rebuild of Deer Rips Substation	Asset condition, and problems with joint ownership of facilities within hydro station	2028	Planned
	Warren 34.5 kV Substation	New Warren Substation at a new location	Asset condition, maintenance, reliability, and safety concerns	2025	In Service
	South Berwick 34.5 kV Substation	New South Berwick Substation at a new location	Asset condition, reliability, and safety concerns	2026	Planned

## LSP Projects – Asset Condition

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Asset Condition	Upgrade 34.5 kV Section 151A	New Underground Cable and Duct Bank	Asset Condition of the underground line	2026	Planned
	Partial Rebuild of 34.5 kV Section 1	34.5 kV Rebuild from Augusta Eastside to McCoy's	Asset condition, and several safety concerns	Q1 2026	Under Construction
	34.5 kV Section 53	Structure Replacements	138 "Reject" Structures, making up 23% of the line	2026	Under Construction
	34.5 kV Structure Replacements	Remove the woodpecker damaged poles and replace them with steel structures	Reliability Risk and Asset (Pole) Condition Replacement	2024-2026	Under Construction/Planned

# LSP Projects – Distribution Projects

Project Origin	Major Project	Project Description	Needs Assessment	In-Service Date	Status
Distribution Reliability	Rock Row 34.5 kV Substation	New greenfield 34.5kV Substation with line breakers	Upgrade needed to support load growth	2025	Under Construction
	Hinckley Pond 115 kV Substation	Brownfield Rebuild Hinckley Pond Substation and add a Parallel 115/12.47 kV Transformer	Distribution Criteria Violations and Asset Condition	2026	Planned
	Brighton Ave 34.5 kV Substation	Rebuild the 34.5 kV bus with to GIS and add auto-sectionalizing schemes	Asset Condition	2028	Proposed
	McCoy's 34.5 kV T1 Replacement	Replace existing T1 with a 2.5/3.125MVA unit.	Upgrade needed to support load growth	2025	Planned
	Stickney's Corner 34.5 kV T1 Replacement	Emergency replacement of existing T1 with a 5/7MVA unit.	Unplanned Equipment Change: Transformer	2025	In Service

## LSP Projects – Transmission Projects

Project Origin	Major Project	Project Description	Needs Assessment	In-Service Date	Status
Transmission Reliability	34.5 kV Transmission Automation	Add motor operators to switches	Reliability	2024-2026	Planned
Relay Limitations	34.5 kV Relay Limitations	Upgrade Relays	Thermal Violations	2026	Planned

## LSP Projects - FERC Projects

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Generator Interconnection	QP910 (20 MW Solar)	New 34.5kV breaker and bay position at Sanford	Interconnection Request	2025	In Service
	QP786 (20 MW Solar)	New 34.5 kV three breaker ring bus on section 185A	Interconnection Request	2026	Canceled
		Rebuild 1.88-miles of 34.5 kV Section 185	Interconnection Request	2026	Canceled
	QP953 (20 MW Solar)	New 34.5kV breaker and bay position at Augusta East	Interconnection Request	2027	Planned

## LSP Projects - FERC Projects

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Generator Interconnection	QP1013 (20 MW Solar)	New 34.5 kV three breaker ring bus	Interconnection Request	2028	Canceled
		Upgrade 34.5 kV Section 43	Interconnection Request	2028	Canceled
	QP1021 (16.425 MW Solar)	Rerate 34.5 kV Section 182	Interconnection Request	2026	Planned
		New 34.5 kV three breaker ring bus	Interconnection Request	2026	Planned
	QP1087 (18.1 MW Solar)	New 34.5 kV Breaker at County Road	Interconnection Request	2026	Planned
		Upgrade 34.5 kV Section 56 between Winslow and County Road	Interconnection Request	2026	Planned
	QP1139 (19.1 MW Solar)	New 34.5 kV Three beaker ring bus	Interconnection Request	2026	Planned

# LSP Projects - FERC Projects

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Generator Interconnection	QP935 (17 MW Solar)	New 34.5 kV Three breaker straight bus	Interconnection Request	2028	Planned
		Rebuild 34.5 kV Section 92	Interconnection Request (CMP Funded)	2028	Planned
	QP1241 (Sanford/Quaker Hill Cluster)	115/34.5 kV Transformer LTC Adjustments	Interconnection Request (CMP Funded)	2025	Canceled
		Re-rate 34.5 kV Section 76	Interconnection Request (Customer Funded)	2027	Canceled
	QP1242 (Lewiston Cluster)	115/34.5 kV Transformer LTC Adjustments	Interconnection Request (CMP Funded)	2025	Canceled
		Add 10 MVAR Capacitor to 115 kV Dogtown Road	Interconnection Request (Customer Funded)	2026	Canceled
	QP1255 (Detroit/Guilford/Belfast Cluster)				

# LSP Projects - FERC Projects

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Generator Interconnection	Raymond Cluster	115/34.5 kV Transformer LTC Adjustments	Interconnection Request (CMP Funded)	2025	Proposed
		Upgrade switch on 34.5 kV Section 157	N-1-1 Thermal Violation (Customer Funded)	2027	Proposed
		Upgrade Switch and Relay on 34.5 kV Section 168	N-1-1 Thermal Violation (Customer Funded)	2027	Proposed
	QP1244 (Sturtevant Cluster)	Add a 10 MVAR Capacitor to 115 kV Dogtown Road	Voltage Violations (Customer Funded)	2026	Canceled
	QP1099 (Midcoast Cluster)	Split of 4 MVAR DRD at 34.5 kV Bristol Substation into 2x2 MVAR devices	Voltage Violations (Customer Funded)	2028	Proposed
		2x2 MVAR DRD at 34.5 kV Bristol Substation	Voltage Violations (CMP Funded)	2028	Proposed
		115/34.5 kV Transformer LTC Adjustments	Interconnection Request (CMP Funded)	2025	Proposed

## LSP Projects - FERC Projects

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Generator Interconnection	QP1254 (Kimball Road)	Upgrade 34.5 kV Section 91	N-1 Overloads (Customer Funded)	2029	Canceled
		Rebuild 34.5 kV Section 143	N-0/N-1 Overloads (Customer Funded)	2029	Canceled
		115/34.5 kV Transformer LTC Adjustments	N-1/N-1-1 Voltage Violations (CMP Funded)	2025	Canceled
		Adjust Hiram Hydro Voltage Setpoint at 34.5 kV	N-1/N-1-1 Voltage Violations (CMP Funded)	2025	Canceled
		Adjust QP1021 Voltage Setpoint at 34.5 kV	N-1/N-1-1 Voltage Violations (CMP Funded)	2025	Canceled
		Relay Upgrade on 34.5 kV Section 157	N-1/N-1-1 Thermal Violations (CMP Funded)	2025	Canceled
		Relay Upgrade on 34.5 kV Section 168	N-1/N-1-1 Thermal Violations (CMP Funded)	2025	Canceled
		Relay Upgrade on 34.5 kV Section 183	N-1/N-1-1 Thermal Violations (CMP Funded)	2025	Canceled

# LSP Projects - FERC Projects

Project Origin	Major Project	Project Description	Needs Assessment	Projected In-Service Date	Status
Generator Interconnection	QP 1171 Twin Energy	Upgrade 115/34kV Transformer at Roxbury	N-1/N-1-1 Thermal Violations (CMP Funded)	2026	Planned
	QP 1100 Hartland Solar	New 115kV 3 breaker ring bus S/S	N-1/N-1-1 Thermal Violations (CMP Funded)	2028	Planned
		Rerate 115kV S.82		2028	Planned
		(2) 10MVAR Cap Banks at Dogtown Rd S/S		2028	Planned
	QP 1086 Warren Meadow	New 115kV 3 breaker ring bus S/S	N-1/N-1-1 Thermal Violations (CMP Funded)	2028	Planned
	QP896 HEP Solar	New breaker at Louden S/S	N-1/N-1-1 Thermal Violations (CMP Funded)	2027	Planned

# Discussion / Q&A

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