

# Appendix A - Area Definitions

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## I. Background

The ISO New England Reliability Coordinator Area/Balancing Authority Area (RCA/BAA) is currently divided into 11 areas based on voltage/reactive performance, the number and strength of interconnections between voltage levels, and physical characteristics such as length of transmission lines, overhead or underground construction, etc. These 11 area definitions contained in the following tables may be updated from time-to-time, as system changes dictate.

## II. ISO New England RCA/BAA Voltage/Reactive Area Definitions

The 11 area definitions are as follows:

### Maine Area

Transmission Element Description	Terminals	Voltage
3001 line	Keswick – Keene Road	345 kV
390/3016 line	Point Lepreau – Orrington	345 kV
391 line	Scobie Pond – Buxton	345 kV
385 line	Deerfield – Buxton	345 kV
3022 line	Eliot – Maguire Road	345 kV
250 line	Three Rivers – Maguire Road	115 kV
NECEC	Merrill Road (like a resource in the ME area)	HVDC
197 line	Three Rivers – Quaker Hill	115 kV
214-3 line section	Saco Valley – Lovell	115 kV
T2 transformer	Bolt Hill 115 kV – Bolt Hill 34.5 kV	115/34.5 kV
T3 transformer	Bolt Hill 115 kV – Bolt Hill 34.5 kV	115/34.5 kV
T4 transformer	Bolt Hill 115 kV – Bolt Hill 34.5 kV	115/34.5 kV

### New Hampshire Area

Transmission Element Description	Terminals	Voltage
391 line	Buxton – Scobie Pond	345 kV
385 line	Buxton – Deerfield	345 kV
3022 line	Maguire Road – Eliot	345 kV
250 line	Maguire Road – Three Rivers	115 kV
197 line	Quaker Hill – Three Rivers	115 kV
214-3 line section	Lovell – Saco Valley	115 kV
3124 line	Tewksbury – Scobie Pond	345 kV
394-1 line section	West Amesbury – Seabrook	345 kV
326-2 line section	Sandy Pond – Lawrence	345 kV
Y151N line section	Pelham – Power Street	115 kV
A201 line	North Litchfield *– Comerford	230 kV*
B202S line	North Litchfield *– Dunbarton Tap	230 kV*
379 line	Vernon_VT – Fitzwilliam	345 kV
F206 line	Granite – Comerford	230 kV
K174 line	Ascutney – North Road	115 kV
I135N-1 line section	Bellows Falls – Monadnock Tap	115 kV
I135N-6 line section	East Winchendon – Fitzwilliam	115 kV
K60 line	St. Johnsbury – Littleton	115kV
N186-2 line section	Vernon Tap – Chestnut Hill	115 kV
3316 line	Barnet – Comerford	34.5 kV
3318 line	McIndoes – Monroe	34.5 kV
T2 transformer	Bolt Hill 34.5 kV – Bolt Hill 115 kV	115/34.5 kV
T3 transformer	Bolt Hill 34.5 kV – Bolt Hill 115 kV	115/34.5 kV
T4 transformer	Bolt Hill 34.5 kV – Bolt Hill 115 kV	115/34.5 kV

\*Granite Ridge CT1 & CT2 units located in NEMA area on 230 kV lines, ST unit located in NH area on 115 kV line

**Vermont Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
1400 line	Stanstead – Derby (Derby load is normally fed radially out of Quebec but may be switched to the VELCO system.)	120 kV
Highgate Converter	Highgate (like a resource within the VT area)	HVDC
PV20-2 line section	Plattsburgh – South Hero	115 kV
K7 line section	Whitehall – Blissville	115 kV
K60 line	Littleton – St. Johnsbury	115 kV
379 line	Fitzwilliam – Vernon_VT	345 kV
381 line	Northfield – Vernon_VT	345 kV
I135N-1 line section	Monadnock Tap – Bellows Falls	115 kV
J136N-1 line section	East Winchendon – Bellows Falls	115 kV
K174 line	North Road – Ascutney	115 kV
F206 line	Comerford – Granite	230 kV
3316 line	Comerford – Barnet	34.5 kV
3318 line	Monroe – McIndoes	34.5 kV
B4 line	Manchester – Bromley Tap	46 kV
N186-2 line section	Chestnut Hill – Vernon Tap	115 kV

**Northeast MA Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
394-1 line section	Seabrook – West Amesbury	345 kV
326-2 line section	Lawrence – Sandy Pond	345 kV
Y151N line section	Power Street – Pelham	115 kV
A201 line	Comerford – North Litchfield *	230 kV*
B202S line	Dunbarton Tap – North Litchfield *	230 kV*
K137 line	Ayer – Sandy Pond	115 kV
L138W-1 line section	Laurel Circle – Sandy Pond	115 kV
314 line	Wachusett – Sandy Pond	345 kV
343 line	Wachusett – Sandy Pond	345 kV
M139-4 line section	North Woburn Tap – Pinehurst	115 kV
N140-2 line section	North Woburn Tap – Pinehurst	115 kV
3124 line	Scobie Pond – Tewksbury	345 kV
338 line	Woburn – Tewksbury	345 kV
349X+Y line	Mystic – Golden Hill	345 kV
O167	Hendersonville – Everett	115 kV
128-518 line	Chelsea – Revere	115 kV
Phase II	Sandy Pond (like a resource within the NEMA area)	HVDC
3136 line	Woburn – Wakefield Junction	345 kV

\* Granite Ridge CT1 & CT2 units located in NEMA area on 230 kV lines, ST unit located in NH area on 115 kV line

**Central MA/Harriman Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
J136N-1 line section	Bellows Falls – East Winchendon	115 kV
I135-6 line section	Fitzwilliam – East Winchendon	115 kV
B4 line	Bromley Tap – Manchester	46 kV
K6 line	Hoosick – Bennington	115 kV
E205W line	Eastover – Bear Swamp	230 kV
F132 line	Partridge – Adams	115 kV
A127W-2 line section	Montague– Montague Tap	115 kV
Y177-1 line	Montague –Mass Yankee	115 kV
301 line	Ludlow – Carpenter Hill	345 kV
X176-1 line	Ludlow – Thorndike	115 kV
1205 line	Ludlow – West Hampden	115 kV
1976 line	Scitico – West Hampden	115 kV
Q143 line section	Woonsocket – Uxbridge	115 kV
R144N-2 line section	Woonsocket – Whitins Pond	115 kV
C129N-1 line section	Purchase Street – Millbury	115 kV
D130-1 line section	Purchase Street – Millbury	115 kV
366 line	West Farnum – Millbury	345 kV
323 line	West Medway – Millbury	345 kV
357 line	West Medway – Millbury	345 kV
D156/513-507 line	West Framingham – Northboro Road	115 kV
314 line	Sandy Pond – Wachusett	345 kV
343 line	Sandy Pond – Wachusett	345 kV
K137 line	Sandy Pond – Ayer	115 kV
L138W-1 line section	Sandy Pond – Laurel Circle	115 kV
1604 line	Northfield – Erving	115 kV

**Western MA Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
381 line	Vernon_VT – Northfield	345 kV
393 line	Alps – Berkshire	345 kV
3216 line	North Bloomfield – Agawam	345 kV
301 line	Carpenter Hill – Ludlow	345 kV
3419 line	Barbour Hill – Ludlow	345 kV
F132 line	Adams – Partridge	115 kV
A127W-2 line section	Montague Tap – Montague	115 kV
Y177-1 line	Mass Yankee – Montague	115 kV
X176-1 line	Thorndike– Ludlow	115 kV
1205 line	West Hampden – Ludlow	115 kV
1976 line	West Hampden – Scitico	115 kV
1604 line	Erving – Northfield	115 kV

**Boston Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
338 line	Tewksbury – Woburn	345 kV
456-522 line	West Walpole – Dover	115 kV
274-509-1 line section	Medway – Holliston	115 kV
240-601 line	West Medway – Framingham	230 kV
342-603 line	West Medway – Sudbury	230 kV
D156/513-507 line	Northboro Road – West Framingham	115 kV
M139-4 line section	Pinehurst – North Woburn Tap	115 kV
N140-2 line section	Pinehurst – North Woburn Tap	115 kV
349X+Y line	Golden Hills – Mystic	345 kV
O167	Everett – Hendersonville	115 kV
128-518 line	Revere – Chelsea	115 kV
517-524 line	North Quincy – Dewar Street (normally open)	115 kV
517-525 line	North Quincy – Dewar Street (normally open)	115 kV
345A transformer	Hyde Park – 345A	345/115 kV
345A transformer	K Street – 345A	345/115 kV
345B transformer	K Street – 345B	345/115 kV
3136 line	Wakefield Junction - Woburn	345 kV

**Southeast Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
315 line	West Farnum – Brayton Point	345 kV
3361 line	Sherman Road – ANP Blackstone	345 kV
C129N-1 line section	Millbury – Purchase Street	115 kV
D130-1 line section	Millbury – Purchase Street	115 kV
323 line	Millbury – West Medway	345 kV
357 line	Millbury – West Medway	345 kV
456-522 line	Dover – West Walpole	115 kV
274-509-1 line section	Holliston – Medway	115 kV
240-601 line	Framingham – West Medway	230 kV
342-603 line	Sudbury – West Medway	230 kV
517-524 line	Dewar Street – North Quincy (normally open)	115 kV
517-525 line	Dewar Street – North Quincy (normally open)	115 kV
345A transformer	Hyde Park – 345A	345/115 kV
345A transformer	K Street – 345A	345/115 kV
345B transformer	K Street – 345B	345/115 kV
K15 line	Robinson Ave – Swansea*	115 kV
T7-1 line	Dunnell Park – Pottersville	115 kV
X3N-1 line	Phillipsdale Tap – Grand Army	115 kV
V148S-2 line section	V148 Tap – Read Street	115 kV
E183E-1 line section	Wampanoag – Mink Street	115 kV
* Note: Robinson Ave substation is in MA but accounts for net RI/MA flow		

**Rhode Island Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
315 line	Brayton Point – West Farnum	345 kV
3361 line	ANP Blackstone – Sherman Road	345 kV
347 line	Killingly – Sherman Road	345 kV
366 line	Millbury – West Farnum	345 kV
341 line	Lake Road – West Farnum	345 kV
1870S-1 line	Shunock – Chase Hill	115 kV
K15 line	Swansea – Robinson Ave*	115 kV
T7-1 line	Pottersville – Dunnell Park	115 kV
X3N-1 Line	Grand Army – Phillipsdale Tap	115 kV
V148S-2 line section	Read Street – V148 Tap	115 kV
E183E-1 line section	Mink Street – Wampanoag	115 kV
R144N-2 line section	Whitins Pond – Woonsocket	115 kV
Q143 line section	Uxbridge – Woonsocket	115 kV
* Note: Robinson Ave substation is in MA but accounts for net RI/MA flow		

**Connecticut Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
398 line	Cricket Valley – Long Mountain	345 kV
690/FV line	Smithfield – Salisbury	69 kV
3216 line	Agawam – North Bloomfield	345 kV
3419 line	Ludlow – Barbour Hill	345 kV
341 line	West Farnum – Lake Road	345 kV
347 line	Sherman Road – Killingly	345 kV
1870S-1 line	Chase Hill – Shunock	115 kV
321 line	Plumtree – Long Mountain	345 kV
3827 line	East Devon – Beseck	345 kV
1445 line	Shaws Hill – Frost Bridge	115 kV
1340-2 line section	Baldwin Tap – Frost Bridge	115 kV
1721 line	Freight – Frost Bridge	115 kV
1238 line	Carmel Hill – Frost Bridge	115 kV
1208 line	Wallingford – Southington	115 kV
1610-1 line section	Glen Lake Junction – Southington	115 kV
8100 line	Grand Avenue – East Shore	115 kV
8200 line	Grand Avenue – East Shore	115 kV
1460 line	Branford Railroad – East Shore	115 kV
1738 line	Branford – Stepstone	115 kV
Cross Sound Cable	Cross Sound Cable (like a resource within the CT area)	HVDC
601/602/603	Northport – Norwalk Harbor	<u>138 kV</u>

**Southwest CT Area**

<b>Transmission Element Description</b>	<b>Terminals</b>	<b>Voltage</b>
321 line	Long Mountain – Plumtree	345 kV
3827 line	Beseck – East Devon	345 kV
1445 line	Frost Bridge – Shaws Hill	115 kV
1340-2 line section	Frost Bridge – Baldwin Tap	115 kV
1721 line	Frost Bridge – Freight	115 kV
1238 line	Frost Bridge – Carmel Hill	115 kV
1208 line	Southington – Wallingford	115 kV
1610 line	Southington – Glen Lake Junction	115 kV
8100 line	East Shore – Grand Avenue	115 kV
8200 line	East Shore – Grand Avenue	115 kV
1460 line	East Shore – Branford Railroad	115 kV
1738 line	Stepstone – Branford	115 kV
601 line	Northport – Norwalk Harbor	138 kV
602 line	Northport – Norwalk Harbor	138 kV
603 line	Northport – Norwalk Harbor	138 kV

### III. OP-17 Appendix A Revision History

**Document History** (This Document History documents action taken on the equivalent NEPOOL Procedure prior to the RTO Operations Date as well as revisions made to the ISO New England Procedure subsequent to the RTO Operations Date.)

Rev No.	Date	Reason
--	07/03/24	For previous revision history, refer to Rev 20 available through Ask ISO;
20.1	07/31/23	Biennial review performed by procedure owner requiring no intent changes; Added missing asterisk to voltage for A201 and B202S lines in the New Hampshire and Northeast tables; Made administrative changes required to publish a Minor Revision.
20.2	07/03/24	Biennial review performed by procedure owner requiring no intent changes; Corrected the Southeast Area and Rhode Island Area definition; Added the Note "Robinson Ave substation is in MA but accounts for net RI/MA flow" at the bottom of both tables that include the K15 line; Made administrative changes required to publish a Minor Revision.
21	08/28/25	Periodic review performed by procedure owner; Addition of NECEC to Maine Area.