

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|-------------------------------|--------------------------|---------------------------------|---|--|--------------------|--------------------|----------------------|--------------|---|---|---|---------------------|
| TABLE A | | | | | | | | | | | | | | | Column T - Column S |
| MAINE | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 144 | Bangor Hydro-Electric Company | | 12/2010 | Keene Rd Autotransformer | Installation of a 345/115 kV autotransformer at Keene Rd Substation. | Under Construction | Under Construction | No | No | \$29,000,000 | \$29,000,000 | \$29,000,000 | \$0 |
| Reliability Upgrade | 1a | 625 | Central Maine Power Company | | 04/2010 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Rumford Industrial Park capacitor bank. | Under Construction | Under Construction | 11/30/2007 | No | \$5,400,000 | \$5,400,000 | \$5,400,000 | \$0 |
| Reliability Upgrade | 1a | 1128 | Central Maine Power Company | | 07/2010 | CMP-LSP Hotel Road Substation | Add 115/34kV transformer with 115kV breaker at Hotel Rd. | Planned | Planned | 8/20/2008 | NR | \$800,000 | \$800,000 | \$800,000 | \$0 |
| Reliability Upgrade | 1a | 624 | Central Maine Power Company | | 2010 | Rumford-Woodstock-Kimball Road Corridor Project | Install 115 kV line (New Page - Rumford Industrial Park) | Planned | Planned | 11/30/2007 | No | Part of project 625 | Part of project 625 | Part of project 625 | |
| Reliability Upgrade | 1a | 905 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Orrington-Albion Rd-Coopers Mills, Coopers Mills-Larrabee Road, Larrabee Road-Surowiec). | Planned | Planned | 7/31/2008 | 1/29/2010 | \$1,510,000,000 | \$1,510,000,000 | \$1,510,000,000 | \$0 |
| Reliability Upgrade | 1a | 906 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 115kV line construction (Orrington-Coopers Mills, Coopers Mills-Highland, Larrabee Road-Lewiston Lower, Larrabee Road-Livermore Falls, Livermore Falls-Rumford IP) | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 907 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Rebuild Existing 115kV lines: Sections 86 (Bucksport-Belfast), Section 84 (Albion Road-Coopers Mills), Section 203 (Detroit-Orrington), Section 80 (Coopers Mills-Highland), Sections 60 & 212 (Coopers Mills-Bowman St-Larrabee Road), Sections 89 & 229 (Livermore Falls-Riley-Rumford IP) | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 908 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Albion Road, Larrabee Road) | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 909 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Add 2-115kV breakers & rebuild 86A, new .25 mile transmission at Belfast | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 1025 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Separation of Double Circuit Towers (345kV Kennebec River Crossing 375/377 & Maine Yankee 375/392, 115kV Bucksport 65/205) and Maine Yankee 345 kV re-termination | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 1026 | Central Maine Power Company | Northeast Utilities | 12/2012 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Surowiec-Raven Farm, South Gorham-Maguire Road, Maguire Road-Three Rivers) | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Portion of CMP \$1.51B and portion of NU is \$35.1M | Portion of CMP \$1.51B and portion of NU is \$36.0M | \$36,000,000 | \$900,000 |
| Reliability Upgrade | 1a | 1027 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 115kV Line Construction (Elm Street-East Deering, East Deering -Cape) | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 1028 | Central Maine Power Company | Northeast Utilities | 12/2012 | Maine Power Reliability Program (MPRP) | Rebuild existing 115kV Line (Section 250, Maguire Rd-Three Rivers) | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Portion of CMP \$1.51B and portion of NU is TBD | Portion of CMP \$1.51B and portion of NU is TBD | Portion of CMP \$1.51B and portion of NU is TBD | |
| Reliability Upgrade | 1a | 1029 | Central Maine Power Company | | 11/2010 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformer at South Gorham | Under Construction | Under Construction | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 1158 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Two 40 MVAR reactors at Albion Road, two 40 MVAR reactors at Larabee Road, two 40 MVAR at Coopers Mills | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 1030 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Raven Farm, Maguire Road) | Planned | Planned | 7/31/2008 & 2/26/09 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | |
| Reliability Upgrade | 1a | 143 | Bangor Hydro-Electric Company | | 12/2012 | Down East Reliability Improvement | Contract 115 kV from Trenton tap (part of Hancock Reliability Project) to new Tunk Lake Substation to Harrington Substation. | Planned | Planned | 5/10/2006 | 6/13/2008 | \$66,100,000 | \$66,100,000 | \$66,100,000 | \$0 |
| Reliability Upgrade | 1a | 1129 | Central Maine Power Company | | 05/2012 | | New 115kV line between Wyman Hydro and Heywood Rd. parallel to exiting Section 83. Install a 115kV circuit breaker at Wyman Hydro termination | Planned | Planned | 1/26/2009 | No | \$19,500,000 | \$32,800,000 | \$32,800,000 | \$13,300,000 |
| Reliability Upgrade | 1a | 1144 | Central Maine Power Company | | 09/2010 | Heywood Road Project | Circuit switcher replacements at Detroit, Lakewood, Rice Rips and Winslow | Under Construction | Under Construction | 3/20/2009 | 7/20/2009 | Part of Heywood Road Project | Part of Heywood Road Project | Part of the Heywood Road Project | |
| Generator Interconnection Upgrade | 2a | 770 | Central Maine Power Company | | 12/2010 | Queue Position 137 | Installation of New Page Substation (aka Railroad Street Substation) with (3) circuit breakers tapping Section 218 115kV. | Proposed | Proposed | 3/18/2007 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1159 | Central Maine Power Company | | 07/2010 | Queue Position 197 | Add a new 115kV breaker and new 115kV line termination at the former T2 position at Rumford 115kV substation | | Planned | 9/29/2009 | NR | | NR | NR | |
| NEW HAMPSHIRE | | | | | | | | | | | | | | | |

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|--------------------------------|--------------------------|---------------------------------|--|---|--------------------|--------------------|----------------------|--------------|---|---|---|--------------|
| Reliability Upgrade | 1a | 277 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Add 2nd 345/115 kV autotransformer and 3-345kV breakers at Deerfield substation. | Planned | Planned | 6/29/2009 | No | \$56,600,000 | \$56,000,000 | \$56,000,000 | -\$600,000 |
| Reliability Upgrade | 1a | 1137 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Replace 5-115kV breakers and add 1-115kV breaker at Deerfield Substation | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | |
| Reliability Upgrade | 1a | 1138 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Rebuild 115kV L175 line | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | |
| Reliability Upgrade | 1a | 1139 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV M183 Line | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | |
| Reliability Upgrade | 1a | 1140 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV C129 Line | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | |
| Reliability Upgrade | 1a | 1141 | Northeast Utilities | | 2015 | 2nd Deerfield 345/115kV Autotransformer Project | Rochester Substation Upgrades | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | |
| Reliability Upgrade | 1a | 680 | National Grid, USA | | 03/2013 | | Rebuild Bellows Falls Substation and install 115 kV capacitor bank. | Planned | Planned | 1/28/2008 | No | \$7,393,000 | \$7,393,000 | \$7,393,000 | \$0 |
| Reliability Upgrade | 1a | 674 | National Grid, USA | | 12/2013 | | Replace Comerford 230 kV breakers and add (1) 230 kV bus tie breaker. | Planned | Planned | 4/1/2008 | No | \$7,720,000 | \$22,115,000 | \$22,115,000 | \$14,395,000 |
| Elective | 4a | 1142 | FPL New England Division | | 04/2011 | | Seabrook Station Reconfiguration and Circuit Breaker addition Stage s 1 & 2 | Planned | Planned | 11/20/2008 | NR | NR | TBD | TBD | |
| Generator Interconnection Upgrade | 2a | 724 | National Grid, USA | | TBD | NGRID Comerford Substation | NGRID Comerford Substation. | Planned | Planned | 6/12/2007 | NR | NR | NR | NR | |
| VERMONT | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 139 | Vermont Electric Power Company | | 12/2015 | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 2: synchronous condensers expanded to +200/- 100 MVAR and two 25 MVAR capacitor banks. | Planned | Planned | 01/10/2003 | 03/31/2003 | \$20,000,000 | \$20,000,000 | \$20,000,000 | \$0 |
| Reliability Upgrade | 1a | 1145 | Vermont Electric Power Company | | 12/2010 | Burlington Gorge Project | Installation of a 3-breaker 115kV ring substation and 115/34.5kV transformer on the East Ave. - Tafts Coners 115kV line | Planned | Planned | 10/24/2006 | No | \$14,000,000 | \$14,000,000 | \$14,000,000 | \$0 |
| Reliability Upgrade | 1a | 323 | Vermont Electric Power Company | | 12/2010 | Vermont Southern Loop Project | New VY - Newfane - Coolidge 345 kV line with requisite station upgrades. | Under Construction | Under Construction | 10/1/2008 | No | \$136,368,000 | \$136,368,000 | \$136,368,000 | \$0 |
| Reliability Upgrade | 1a | 1032 | Vermont Electric Power Company | | 09/2010 | Vermont Southern Loop Project | Installation of a new 345/115kV substation called Vernon including a new 345/115kV autotransformer | Under Construction | Under Construction | 10/1/2008 | No | \$69,815,000 | \$69,815,000 | \$69,815,000 | \$0 |
| Reliability Upgrade | 1a | 1033 | Vermont Electric Power Company | | 12/2010 | Vermont Southern Loop Project (VELCO LSP - Newfane Substation) | Installation of a new 345/115kV substation called Newfane | Under Construction | Under Construction | 10/1/2008 | No | \$16,664,000 | \$16,664,000 | \$16,664,000 | \$0 |
| Reliability Upgrade | 1a | 1034 | Vermont Electric Power Company | | 12/2010 | Vermont Southern Loop Project | Loop new 345kV Line into Newfane Substation. | Under Construction | Under Construction | 10/1/2008 | No | Part of project 323 | Part of project 323 | Part of project 323 | |
| Reliability Upgrade | 1a | 1035 | Vermont Electric Power Company | | 12/2010 | Vermont Southern Loop Project | Expansion of Coolidge 345kV substation | Under Construction | Under Construction | 10/1/2008 | No | \$20,117,000 | \$20,117,000 | \$20,117,000 | \$0 |
| Reliability Upgrade | 1a | 1146 | Vermont Electric Power Company | | 02/2011 | Lyndonville Project | Installation of a 4-breaker ring 115 kV substation consisting of two 115kV 12.5 MVAR capacitor banks and 115/34.5 kV transformer interconnecting to the Irasburg - St. Johnsbury 115kV line | Planned | Planned | 6/1/2009 | No | \$9,000,000 | \$9,000,000 | \$9,000,000 | \$0 |
| Generator Interconnection Upgrade | 2a | 1036 | Vermont Electric Power Company | | 10/2010 | Queue Position 172 | Installation of 3-breaker 115kV ring bus interconnection of the St. Johnsbury-Irasburg 115kV K39 line. | Planned | Planned | 08/16/2007 | NR | NR | NR | NR | |
| MASSACHUSETTS | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 1152 | National Grid, USA | | 8/2010 | | Bear Swamp - Pratts Junction 230kV Line Refurbishment Project (E205E) | Planned | Planned | NR | NR | \$43,596,000 | \$43,596,000 | \$43,596,000 | \$0 |
| Reliability Upgrade | 1a | 887 | National Grid, USA | | 09/2012 | Auburn Area Transmission System Upgrades | Expand Auburn St Substation to include 2nd 345/115 kV autotransformer and 345 kV ring bus. | Planned | Planned | 1/28/2008 | No | \$30,000,000 | \$76,000,000 | \$76,000,000 | \$46,000,000 |
| Reliability Upgrade | 1a | 921 | National Grid, USA | | 06/2012 | Auburn Area Transmission System Upgrades | Bridgewater substation - Upgrade Bus work and convert to BPS substation. | Planned | Planned | 1/28/2008 | No | \$12,100,000 | \$40,000,000 | \$40,000,000 | \$27,900,000 |
| Reliability Upgrade | 1a | 919 | National Grid, USA | | 12/2012 | Auburn Area Transmission System Upgrades | Dupont substation - Upgrade Buswork and convert to BPS substation. | Planned | Planned | 1/28/2008 | No | \$4,600,000 | \$4,600,000 | \$4,600,000 | \$0 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|--|--|--------------------|--------------------|----------------------|--------------|------------------------------|------------------------------|------------------------------|--------------|
| Reliability Upgrade | 1a | 59 | National Grid, USA | | 06/2012 | Auburn Reliability Transmission System Upgrades | G18, F19 line terminals 115kV upgrades at Bridgewater sub | Planned | Planned | 11/1/2007 | 1/31/2003 | \$400,000 | Part of RSP 921 | Part of RSP 921 | |
| Reliability Upgrade | 1a | 783 | National Grid, USA | | 03/2011 | Merrimack Valley/North Shore Reliability Project | Extend the 115kV by addition of 115kV Breaker and K-153 line from King St. to W. Amesbury 115kV station. (W. Amesbury 345/115kV Station becomes PTF) | Planned | Planned | 4/1/2008 | No | \$30,349,000 | \$30,349,000 | \$30,349,000 | \$0 |
| Reliability Upgrade | 1a | 779 | National Grid, USA | | 04/2010 | Merrimack Valley/North Shore Reliability Project | Bypass and remove Golden Hills 345 kV substation. | Under Construction | Under Construction | 4/1/2008 | No | \$5,132,609 | \$5,507,195 | \$5,507,195 | \$374,586 |
| Reliability Upgrade | 1a | 840 | NSTAR Electric Company | | 06/2012 | Merrimack Valley/North Shore Reliability Project | Upgrade the 115 kV line (Line 423-515) from Mystic-Everett by adding a new parallel cable to the existing 115 kV cable. (NSTAR portion only) | Planned | Planned | 4/1/2008 | No | \$7,300,000 | \$7,300,000 | \$7,300,000 | \$0 |
| Reliability Upgrade | 1a | 775 | National Grid, USA | | 06/2012 | Merrimack Valley/North Shore Reliability Project | Addition of 4 breakers and relocation of T1 and T2 into new bays at Sandy Pond. | Planned | Planned | 6/27/2008 | No | \$20,100,000 | \$20,100,000 | \$20,100,000 | \$0 |
| Reliability Upgrade | 1a | 776 | National Grid, USA | | 09/2012 | Merrimack Valley/North Shore Reliability Project | Re-conductor O-167 (NGRID portion of Mystic - Everett) 115 kV line. | Planned | Planned | 6/27/2008 | No | \$2,865,876 | \$3,125,000 | \$3,125,000 | \$259,124 |
| Reliability Upgrade | 1a | 782 | National Grid, USA | | 10/2014 | Merrimack Valley/North Shore Reliability Project | Replace existing S145/T146 UG cables with higher capacity cables between Salem Harbor n Railyard. | Planned | Planned | 6/27/2008 | No | \$38,100,000 | \$43,912,000 | \$43,912,000 | \$5,812,000 |
| Reliability Upgrade | 1a | 1165 | NSTAR Electric Company | | 12/2011 | Mystic Breaker Additions Project | Move Transformer 110B Connection at Mystic | | Planned | 3/10/2008 | No | | \$1,700,000 | \$1,700,000 | \$1,700,000 |
| Reliability Upgrade | 1a | 904 | NSTAR Electric Company | | 12/2010 | Mystic IPT Breaker Project | Upgrade (5) 115 kV breakers #1, #7, #15 #19 and #20 at Mystic to IPT. | Planned | Under Construction | NR | NR | \$990,000 | \$1,500,000 | \$1,500,000 | \$510,000 |
| Reliability Upgrade | 1a | 1119 | NSTAR Electric Company | | 06/2010 | Greater Boston Reliability Project | Upgrade West Medway-West Walpole 345kV line #325 | Proposed | Under Construction | NR | NR | \$2,200,000 | \$2,200,000 | \$2,200,000 | \$0 |
| Reliability Upgrade | 1a | 842 | NSTAR Electric Company | | 06/2010 | Boston Area 115 kV Enhancements | Add 115 kV 54 MVAR capacitor bank at W. Framingham. | Proposed | Planned | 12/28/2009 | NR | \$3,700,000 | \$2,650,000 | \$2,650,000 | -\$1,050,000 |
| Reliability Upgrade | 1a | 1120 | NSTAR Electric Company | | 06/2010 | | Install 345kV 160 MVAR shunt reactor at W. Walpole | Proposed | Under Construction | 1/19/2010 | No | \$7,200,000 | \$7,200,000 | \$7,200,000 | \$0 |
| Reliability Upgrade | 1a | 1113 | NSTAR Electric Company | | 12/2010 | | Install 115kV Breaker #31 at K St. | Proposed | Planned | 12/15/2009 | No | \$2,960,000 | \$2,800,000 | \$2,800,000 | -\$160,000 |
| Reliability Upgrade | 1a | 1068 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Install a new 345kV line from Carver to vicinity of Bourne and connect to existing #120 line and install a 345KV - 115kV auto-transformer at new substation about 3 miles west of the Barnstable Substation ⁷ | Proposed | Planned | 11/2009 | No | \$110,000,000 | \$110,000,000 | \$110,000,000 | \$0 |
| Reliability Upgrade | 1a | 592 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Separate existing 345kV double circuit Cape Cod Canal crossing | Proposed | Planned | 11/2009 | No | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA | |
| Reliability Upgrade | 1a | 1118 | NSTAR Electric Company | National Grid, USA | 12/2012 | Long Term Lower SEMA Upgrades | Upgrade 115kV line D21 | Proposed | Planned | 11/2009 | No | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA | |
| Reliability Upgrade | 1a | 929 | National Grid, USA | | 06/2011 | Central/Western Massachusetts Upgrades | Searsburg - install in-line 69 kV breaker for operational flexibility. | Planned | Planned | 12/17/2007 | No | \$1,381,849 | \$1,381,849 | \$1,381,849 | \$0 |
| Reliability Upgrade | 1a | 931 | National Grid, USA | | 01/2013 | Central/Western Massachusetts Upgrades | Park St. - incremental cost of designing for 115 kV instead of 69 kV. | Planned | Planned | 12/17/2007 | No | \$531,481 | \$531,481 | \$531,481 | \$0 |
| Reliability Upgrade | 1a | 928 | National Grid, USA | | 12/2010 | Central/Western Massachusetts Upgrades | Millbury -upgrade terminal equipment for O-141, P-142, B-128, A-127 circuit breakers. | Planned | Planned | 12/17/2007 | No | \$2,300,000 | \$2,300,000 | \$2,300,000 | \$0 |
| Reliability Upgrade | 1a | 934 | National Grid, USA | | 09/2011 | Central/Western Massachusetts Upgrades | Reconductor #2 Tap from Tower 510 - Webster St. 115 kV circuit. | Planned | Under Construction | 12/17/2007 | No | \$818,480 | Part of RSP 935 | Part of RSP 935 | |
| Reliability Upgrade | 1a | 935 | National Grid, USA | | 09/2011 | Central/Western Massachusetts Upgrades | Reconductor from (A-127E/B-128E) Millbury - Tower 510 115 kV line. | Planned | Under Construction | 12/17/2007 | No | \$5,208,509 | \$10,200,000 | \$10,200,000 | \$4,991,491 |
| Reliability Upgrade | 1a | 938 | National Grid, USA | | 05/2012 | Central/Western Massachusetts Upgrades | Deerfield - install a new 115/69kV autotransformer and a 69kV breaker and disconnect switches. | Planned | Planned | 12/17/2007 | No | \$3,068,556 | \$3,068,556 | \$3,068,556 | \$0 |
| Reliability Upgrade | 1a | 939 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Reconductor and retension (E205W) Harriman - Bear Swamp Tap 230 kV circuit. | Planned | Planned | 12/17/2007 | No | \$3,389,658 | \$3,389,658 | \$3,389,658 | \$0 |
| Reliability Upgrade | 1a | 940 | National Grid, USA | | 04/2011 | Central/Western Massachusetts Upgrades | Reconductor sections of A127W line w/795 ACSS. | Planned | Planned | 12/17/2007 | No | \$6,235,744 | \$6,235,744 | \$6,235,744 | \$0 |
| Reliability Upgrade | 1a | 942 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Webster St. - add two 115 kV circuit breakers. | Planned | Planned | 12/17/2007 | No | \$2,767,180 | \$3,650,000 | \$3,650,000 | \$882,820 |
| Reliability Upgrade | 1a | 927 | National Grid, USA | | 07/2010 | Central/Western Massachusetts Upgrades | Greendale - replace 115 kV breaker and upgrade to 2000A. | Planned | Planned | 12/17/2007 | No | \$584,629 | \$680,000 | \$680,000 | \$95,371 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---|--|--------------------|--------------------|----------------------|--------------|---|---|---|-------------|
| Reliability Upgrade | 1a | 925 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - supply 13 kV from T3 and T4. | Planned | Planned | 12/17/2007 | No | \$318,888 | \$318,888 | \$318,888 | \$0 |
| Reliability Upgrade | 1a | 926 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - replace T8 autotransformer with 230 kV 333 mVA, upgrade breaker and bus to 115 kV. Install high side 230 kV breaker. | Planned | Planned | 12/17/2007 | No | \$6,027,520 | \$6,027,520 | \$6,027,520 | \$0 |
| Reliability Upgrade | 1a | 932 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - increase thermal rating of I-135 and J-136 buswork. | Planned | Planned | 12/17/2007 | No | \$372,036 | \$372,036 | \$372,036 | \$0 |
| Reliability Upgrade | 1a | 924 | National Grid, USA | | 12/2010 | Central/Western Massachusetts Upgrades | Replace five 115 kV-25 kA breakers with 115 kV-50 kA breakers and upgrade disconnect switch (175-3) to 2000A. | Planned | Planned | 12/17/2007 | No | \$2,147,181 | \$2,147,181 | \$2,147,181 | \$0 |
| Reliability Upgrade | 1a | 941 | National Grid, USA | | 06/2012 | Central/Western Massachusetts Upgrades | Install new Z126 Millbury - Tower #510 115 kV line. | Planned | Planned | 12/17/2007 | No | \$7,909,203 | \$13,748,000 | \$13,748,000 | \$5,838,797 |
| Reliability Upgrade | 1a | 943 | National Grid, USA | | 01/2011 | Central/Western Massachusetts Upgrades | Millbury - new 115 kV breaker position for new line to Twr 510. | Planned | Planned | 12/17/2007 | No | \$1,073,995 | \$1,073,995 | \$1,073,995 | \$0 |
| Reliability Upgrade | 1a | 944 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Wachusett - install one 345 kV, 448 mVA transformer, one 345 kV breaker, and one 115 kV breaker. | Planned | Planned | 12/17/2007 | No | \$11,411,849 | \$16,530,000 | \$16,530,000 | \$5,118,151 |
| Reliability Upgrade | 1a | 950 | National Grid, USA | | 12/2013 | Central/Western Massachusetts Upgrades | E Winchendon - install 115 kV breaker and 115 kV disconnect switch. | Planned | Planned | 12/17/2007 | No | \$1,016,897 | \$1,016,897 | \$1,016,897 | \$0 |
| Reliability Upgrade | 1a | 953 | National Grid, USA | | 12/2013 | Central/Western Massachusetts Upgrades | Otter River - expand substation into 6-breaker ring bus with four 115 kV breakers and install two transformers. | Planned | Planned | 12/17/2007 | No | \$10,248,067 | \$10,248,067 | \$10,248,067 | \$0 |
| Reliability Upgrade | 1a | 954 | National Grid, USA | | 12/2013 | Central/Western Massachusetts Upgrades | E Westminster - install new 115 kV breaker, including disconnect switches. Assumes no new control house. | Planned | Planned | 12/17/2007 | No | \$903,909 | \$903,909 | \$903,909 | \$0 |
| Reliability Upgrade | 1a | 945 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Adams - install third 115 kV breaker to complete ring bus. | Planned | Planned | 12/17/2007 | No | \$1,584,841 | \$1,584,841 | \$1,584,841 | \$0 |
| Reliability Upgrade | 1a | 946 | National Grid, USA | | 12/2012 | Central/Western Massachusetts Upgrades | Convert 69 kV (O-15S) Palmer - E Longmeadow - Shaker Rd line to 115 kV. | Planned | Planned | 12/17/2007 | No | \$9,604,032 | \$9,962,060 | \$9,962,060 | \$358,028 |
| Reliability Upgrade | 1a | 947 | National Grid, USA | | 12/2012 | Central/Western Massachusetts Upgrades | Reconductor 115 kV line from Palmer to new Hampden Substation. | Planned | Planned | 12/17/2007 | No | \$2,632,635 | \$2,632,635 | \$2,632,635 | \$0 |
| Reliability Upgrade | 1a | 948 | National Grid, USA | | 12/2012 | Central/Western Massachusetts Upgrades | Hampden - build new 115 kV substation at 1515/O-15S intersection (4 breaker ring). | Planned | Planned | 12/17/2007 | No | \$5,649,430 | \$5,649,430 | \$5,649,430 | \$0 |
| Reliability Upgrade | 1a | 949 | National Grid, USA | | 12/2012 | Central/Western Massachusetts Upgrades | Palmer - add 115 kV breaker position for O15S conversion, includes thermal upgrade of W-175 bay. | Planned | Planned | 12/17/2007 | No | \$1,500,000 | \$1,500,000 | \$1,500,000 | \$0 |
| Reliability Upgrade | 1a | 952 | National Grid, USA | | 06/2011 | Central/Western Massachusetts Upgrades | Reconductor E Winchendon - J136 Tap within I135/J136 ROW w/795 ACSR. | Planned | Planned | 12/17/2007 | No | \$932,156 | \$932,156 | \$932,156 | \$0 |
| Reliability Upgrade | 1a | 937 | National Grid, USA | | 05/2012 | Central/Western Massachusetts Upgrades | Bear Swamp - install one 230-115 kV 333 mVA auto, one 115 kV breaker and upgrade various terminal equipment. | Planned | Planned | 12/17/2007 | No | \$6,602,875 | \$6,602,875 | \$6,602,875 | \$0 |
| Reliability Upgrade | 1a | 955 | National Grid, USA | | 11/2011 | Central/Western Massachusetts Upgrades | Reconductor (W175) W Charlton - Little Rest - Palmer w/1590 ACSR. | Planned | Planned | 12/17/2007 | No | \$10,779,113 | \$12,213,934 | \$12,213,934 | \$1,434,821 |
| Reliability Upgrade | 1a | 162 | National Grid, USA | | 04/2011 | | Q-169 Golden Hills to Lynn 115 kV line upgrade. | Under Construction | Under Construction | 9/2/2005 | 4/25/2008 | \$12,390,000 | \$12,390,000 | \$12,390,000 | \$0 |
| Reliability Upgrade | 1a | 902 | National Grid, USA | | 10/2010 | Middleboro Municipal | Close the E1-M1 loop at Middleboro's Wareham St Sub. | Under Construction | Under Construction | 12/01/2006 | NR | \$715,000 | \$715,000 | \$715,000 | \$0 |
| Reliability Upgrade | 1a | 1000 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Separate and reconductor the 1311 and 1412 (West Springfield - Agawam) 115 kV double circuit. | Planned | Planned | 6/27/2008 | No | \$22,000,000 | \$22,000,000 | \$22,000,000 | \$0 |
| Reliability Upgrade | 1a | 951 | National Grid, USA | | 02/2013 | Central/Western Massachusetts Upgrades | Install new Otter River - E Winchendon 115 kV line. | Planned | Planned | 12/17/2007 | No | \$7,455,440 | \$7,455,440 | \$7,455,440 | \$0 |
| Reliability Upgrade | 1a | 687 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Fairmont 16H Substation Expansion | Planned | Planned | 9/24/2008 | No | \$714,000,000 | \$714,000,000 | \$714,000,000 | \$0 |
| Reliability Upgrade | 1a | 826 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | South Agawam 42E Substation Reconfigure | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 196 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line (3216), Agawam (MA) - North Bloomfield (CT) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 818 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reconstruct a new 115kV line South Agawam to Southwick (1768) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---|--|---------------|---------------|----------------------|--------------|---|---|---|-------|
| Reliability Upgrade | 1a | 819 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line Ludlow - Agawam (3196) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 820 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Expansion of Agawam 16C 115 kV Substation to include new 345 kV station with two 345/115-kV autotransformers. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 823 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Ludlow 19S 345 kV Substation Expansion, two 345/115kV Autotransformers replacements. Add two 345kV 120 MVAR Capacitor additions | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 828 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Breckwood 115kV circuit 1322 Reactor Bypass and Open Breckwood Substation 1T breaker and maintain breaker in the normally open position | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 829 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Piper (1230) 115 kV line. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1010 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build 115-kV Cadwell switching 50F station. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 259 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to Orchard (1426) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 688 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Cadwell (1481) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1100 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Chicopee (1314) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1101 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Orchard (1552) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1102 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Piper (1601) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1103 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Chicopee (1602) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1104 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Cadwell (1603) 115kV line and add 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1105 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Shawinigan (1604) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1070 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1781) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1071 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1782) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1072 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Shawinigan (1845) 115kV line and add 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1073 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reterminate Cadwell to East Springfield (5001) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1074 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reterminate Cadwell to East Springfield (5002) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1075 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add 2nd high speed protection scheme to Agawam to Elm (1007) 115kV line if the Russell Biomass Plant, queue position #135 is constructed | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---|---|---------------|---------------|----------------------|--------------|---|---|---|--------------|
| Reliability Upgrade | 1a | 1078 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Pineshed (1327) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1079 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Mt. Tom (1428) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1080 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Replace 4T and 6T 115kV circuit breaker to Shawinigan substation | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1076 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1311) 115kV line | Planned | Planned | 9/24/2008 | No | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project | |
| Reliability Upgrade | 1a | 1077 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1412) 115kV line | Planned | Planned | 9/24/2008 | No | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project | |
| Reliability Upgrade | 1a | 673 | National Grid, USA | | 12/2012 | Worcester Area Reinforcements | Add new 115kV bay to separate the M-165 & E-157 terminal at Millbury #2 Substation | Planned | Planned | 2/27/2009 | No | \$2,200,000 | \$2,200,000 | \$2,200,000 | \$0 |
| Reliability Upgrade | 1a | 676 | National Grid, USA | | 12/2012 | Worcester Area Reinforcements | New Bloomingdale to Vernon Hill 115 kV (UG Cable-3.6 mi.) new 115kV breaker at Bloomingdale & Vernon Hill | Planned | Planned | 2/27/2009 | No | \$30,000,000 | \$30,000,000 | \$30,000,000 | \$0 |
| Reliability Upgrade | 1a | 1067 | NSTAR Electric Company | | 12/2010 | NPCC BPS Compliance | Tremont Station | Proposed | Planned | NR | No | \$12,800,000 | \$12,370,000 | \$12,370,000 | -\$430,000 |
| Reliability Upgrade | 1a | 1066 | NSTAR Electric Company | | 09/2011 | NPCC BPS Compliance | Needham Station | Concept | Planned | NR | No | \$9,300,000 | \$10,531,000 | \$10,531,000 | \$1,231,000 |
| Reliability Upgrade | 1a | 1065 | NSTAR Electric Company | | 07/2012 | NPCC BPS Compliance | Waltham Station | Proposed | Planned | NR | No | \$26,600,000 | \$23,190,000 | \$23,190,000 | -\$3,410,000 |
| Generator Interconnection Upgrade | 2a | 1045 | National Grid, USA | | 06/2010 | Lowell Power | Upgrade 137T and K-137W 115 kV circuit breakers at Sandy Pond. | Planned | Planned | 7/25/2006 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 505 | National Grid, USA | | 12/2010 | Hoosac Wind Farm | Tap Y-25S line between Harriman and Deerfield 5. Construct 69/34.5 kV substation and 34.5 kV line connecting 30 MW generating facility with the 69 kV system. | Planned | Planned | 02/01/2005 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 595 | NSTAR Electric Company | | 01/2012 | Cape Wind | Expansion of Barnstable 115 kV substation to include 5th bay and (2) circuit breakers, addition of a 3rd breaker in the planned 4th bay, and (2) 35MVAR shunt reactors. | Planned | Planned | 10/6/2005 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 596 | NSTAR Electric Company | | 01/2012 | Cape Wind | Installation of (2) 115 kV circuits out of Barnstable substation to interconnect Cape Wind. | Planned | Planned | 10/6/2005 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 598 | NSTAR Electric Company | | 01/2012 | Cape Wind | At Canal 345 kV substation, install a redundant breaker in series with breaker #312. | Planned | Planned | 10/6/2005 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 599 | NSTAR Electric Company | | 01/2012 | Cape Wind | Upgrade the Bourne 115 kV breaker #12272 with an IPT breaker. | Planned | Planned | 10/6/2005 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 600 | NSTAR Electric Company | | 01/2012 | Cape Wind | Installation of differential insulation and additional grounding at each tower that is common for the 342 and 322 345 kV lines. | Planned | Planned | 10/6/2005 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1048 | NSTAR Electric Company | | 01/2012 | Cape Wind | Convert Canal 345 kV SPS to include tripping of Cape Wind for the simultaneous loss of 342 and 322 345 kV lines. | Planned | Planned | 10/6/2005 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1046 | National Grid, USA | | 06/2011 | Queue Position 178 | Reconductor 115 kV F19 Line (Auburn - Brockton Tap). | Proposed | Proposed | 3/10/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1047 | National Grid, USA | | 06/2011 | Queue Position 178 | Replace Bridgewater 115 kV 1631 circuit breaker with 63 kA breaker. | Proposed | Proposed | 3/10/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 622 | Northeast Utilities | | 06/2011 | Queue Position 135 | Interconnection to WMECO's 115-kV 1512 line through a new Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1043 | Northeast Utilities | | 06/2011 | Queue Position 135 | Upgrade the 1768 line terminal equipment at Southwick Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1044 | Northeast Utilities | | 06/2011 | Queue Position 135 | Upgrade the 1512 line terminal equipment at Southwick Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1058 | National Grid, USA | | 06/2011 | Billerica Power | Interconnection to Tewksbury 115 kV Substation via O-193 Line and refurbish section of J-162 line. | Planned | Planned | 7/8/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1059 | National Grid, USA | | 06/2011 | Billerica Power | Re-terminate line tap section (Perry Street) of J-162 Line to new bay position at Tewksbury. | Planned | Planned | 7/8/2008 | NR | NR | NR | NR | |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|-------------------------------------|--------------------------|---------------------------------|--|---|---------------|--------------------|----------------------|--------------|----------------------------|----------------------------|--------------|------------|
| Generator Interconnection Upgrade | 2a | 1060 | National Grid, USA | | 06/2011 | Billerica Power | Reconductor 2.8 mi. of the M-139 115 kV line. | Planned | Planned | 7/8/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1061 | National Grid, USA | | 06/2011 | Billerica Power | Replace (16) 115 kV circuit breakers at Tewksbury 22 w/ IPT capability if all generators w/ higher Queue Position are constructed. The quantity of breaker upgrades subject to Queued generators constructed. | Planned | Planned | 7/8/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1062 | National Grid, USA | | 06/2011 | Billerica Power | Upgrade #137T and #K-137W 115 kV circuit breakers at Sandy Pond (if not completed as part of Merrimack Valley/North Shore Project). | Planned | Planned | 7/8/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1014 | Northeast Utilities | | 2014 | Queue Position 196 | Northfield Mountain 345 kV replace generator step-up transformer (3X) and associated generator equipment. This project also consists of upgrading four existing turbine generators one per year. | Concept | Under Construction | 6/29/2009 | NR | NR | NR | NR | |
| Elective | 4a | 1057 | Braintree Electric Light Department | | 06/2010 | | Upgrade 115-10-16 underground 115 kV cable. | Planned | Planned | 4/17/2008 | No | NR | TBD | TBD | |
| RHODE ISLAND | | | | | | | | | | | | | | \$0 | \$0 |
| Reliability Upgrade | 1a | 484 | National Grid, USA | | 11/2010 | Greater Rhode Island Transmission Reinforcements ¹ | Add (1) new 115 kV breaker at Woonsocket. | Planned | Planned | 4/25/2008 | No | \$690,000 | \$580,000 | \$580,000 | -\$110,000 |
| Reliability Upgrade | 1a | 791 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | New 115 kV circuit between Somerset and Brayton Point. | Planned | Planned | 4/25/2008 | No | \$11,560,000 | \$11,560,000 | \$11,560,000 | \$0 |
| Reliability Upgrade | 1a | 913 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Brayton Point substation reinforcements to accommodate the new 115 kV line. | Planned | Planned | 4/25/2008 | No | \$3,250,000 | \$3,250,000 | \$3,250,000 | \$0 |
| Reliability Upgrade | 1a | 914 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | New third circuit between Somerset and Bell Rock. | Planned | Planned | 4/25/2008 | No | \$28,150,000 | \$28,150,000 | \$28,150,000 | \$0 |
| Reliability Upgrade | 1a | 915 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Reconductor M13 and L14 between Bell Rock and Dexter + Reconductor 69 kV lines 61 and 62. | Planned | Planned | 4/25/2008 | No | \$19,450,000 | \$19,450,000 | \$19,450,000 | \$0 |
| Reliability Upgrade | 1a | 916 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Conversion of Jepson 69 kV substation to 115 kV substation. | Planned | Planned | 4/25/2008 | No | \$11,800,000 | \$11,800,000 | \$11,800,000 | \$0 |
| Reliability Upgrade | 1a | 917 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Bell Rock substation expansion. | Planned | Planned | 4/25/2008 | No | \$7,000,000 | \$7,000,000 | \$7,000,000 | \$0 |
| Reliability Upgrade | 1a | 918 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Dexter substation changes. | Planned | Planned | 4/25/2008 | No | \$3,180,000 | \$3,180,000 | \$3,180,000 | \$0 |
| Reliability Upgrade | 1a | 792 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Admiral St-Franklin Square (Q143 and R144) 115 kV UG recabling. | Planned | Planned | 4/25/2008 | No | \$39,200,000 | \$39,200,000 | \$39,200,000 | \$0 |
| Reliability Upgrade | 1a | 793 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Somerset substation reinforcements. | Planned | Planned | 4/25/2008 | No | \$6,400,000 | \$6,400,000 | \$6,400,000 | \$0 |
| Reliability Upgrade | 1a | 786 | National Grid, USA | | 11/2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Terminal upgrades at Drumrock, Chartley Pond, and Brayton Point. | Planned | Under Construction | 4/25/2008 | No | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$0 |
| Reliability Upgrade | 1a | 787 | National Grid, USA | | 06/2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | West Farnum breaker replacements. | Planned | Under Construction | 4/25/2008 | No | \$7,631,000 | \$7,631,000 | \$7,631,000 | \$0 |
| Reliability Upgrade | 1a | 788 | National Grid, USA | | 06/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Kent County substation expansion. | Planned | Under Construction | 4/25/2008 | No | \$42,300,000 | \$42,300,000 | \$42,300,000 | \$0 |
| Reliability Upgrade | 1a | 790 | National Grid, USA | | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Berry Street 345/115 kV substation. | Planned | Under Construction | 4/25/2008 | No | \$50,600,000 | \$50,600,000 | \$50,600,000 | \$0 |
| Reliability Upgrade | 1a | 1098 | National Grid, USA | | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | 345/115kV line interconnections at Berry Street | Planned | Under Construction | 4/25/2008 | No | \$37,529,000 | \$37,529,000 | \$37,529,000 | \$0 |
| Reliability Upgrade | 1a | 190 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | New Millbury to West Farnum (366) 345kV line. | Planned | Planned | 9/24/2008 | No | \$69,600,000 | \$69,600,000 | \$69,600,000 | \$0 |
| Reliability Upgrade | 1a | 1094 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV Millbury Substation equipment | Planned | Planned | 9/24/2008 | No | \$25,000,000 | \$25,000,000 | \$25,000,000 | \$0 |
| Reliability Upgrade | 1a | 1095 | National Grid, USA | | 06/2012 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV West Farnum Substation Equipment | Planned | Planned | 9/24/2008 | No | \$73,800,000 | \$73,800,000 | \$73,800,000 | \$0 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---------------------|-------|------------|-----------------------------|--------------------------|---------------------------------|---|---|---------------|--------------------|----------------------|--------------|---|---|---|--------------|
| Reliability Upgrade | 1a | 794 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | New West Farnum to Connecticut/Rhode Island border (341) 345kV line (to Lake Road). | Planned | Planned | 9/24/2008 | No | \$55,800,000 | \$55,800,000 | \$55,800,000 | \$0 |
| Reliability Upgrade | 1a | 796 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | 347 Reconductor from Sherman Road to CT/RI Border. | Planned | Planned | 9/24/2008 | No | \$16,400,000 | \$16,400,000 | \$16,400,000 | \$0 |
| Reliability Upgrade | 1a | 797 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | 3361 Upgrade 345kV terminal equipment at Sherman Road. | Planned | Planned | 9/24/2008 | No | \$8,300,000 | \$8,300,000 | \$8,300,000 | \$0 |
| Reliability Upgrade | 1a | 795 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | New Kent County to West Farnum 345kV line. | Planned | Planned | 9/24/2008 | No | \$99,900,000 | \$99,900,000 | \$99,900,000 | \$0 |
| Reliability Upgrade | 1a | 1106 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Installation of third 345/115kV autotransformer at Kent County. | Planned | Planned | 9/24/2008 | No | Part of \$99,900,000 above | Part of \$99,900,000 above | Part of \$99,900,000 above | |
| Reliability Upgrade | 1a | 798 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Upgrade of 115kV terminal equipment at Franklin Square. | Planned | Planned | 9/24/2008 | No | \$4,900,000 | \$4,900,000 | \$4,900,000 | \$0 |
| Reliability Upgrade | 1a | 799 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | G-185N (Kent County-Drumrock) 115 kV reconductor. | Planned | Planned | 9/24/2008 | No | \$4,500,000 | \$4,500,000 | \$4,500,000 | \$0 |
| Reliability Upgrade | 1a | 1096 | National Grid, USA | | 05/2012 | NEEWS (Rhode Island Reliability Project) | Drumrock substation: Terminal equipment upgrades, Protection modifications and upgrades to meet BPS standards | Planned | Planned | 9/24/2008 | No | \$12,000,000 | \$12,000,000 | \$12,000,000 | \$0 |
| Reliability Upgrade | 1a | 800 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Reconductoring of short segments of S-171S, T-172N and T-172S with associated terminal equipment upgrades. | Planned | Planned | 11/5/2009 | No | \$10,000,000 | \$10,000,000 | \$10,000,000 | \$0 |
| Reliability Upgrade | 1a | 1097 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Relocate and Rebuild 115kV lines in the same ROW associated with new 345kV line from W. Farnum to Kent County | Planned | Planned | 9/24/2008 | No | \$129,800,000 | \$129,800,000 | \$129,800,000 | \$0 |
| Reliability Upgrade | 1a | 1099 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Hartford Ave 115kV terminal equipment upgrades | Planned | Planned | 9/24/2008 | No | \$6,000,000 | \$6,000,000 | \$6,000,000 | \$0 |
| Reliability Upgrade | 1a | 1109 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | South Wrentham 115kv terminal equipment upgrades | Planned | Planned | 9/24/2008 | No | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$0 |
| CONNECTICUT | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 1055 | Northeast Utilities | | 2010 | CT LSP - Waterside Substation | Waterside Substation - add a 115/13.2-kV transformer and a 115-kV circuit breaker. | Concept | Planned | 9/29/2009 | NR | \$4,107,000 | \$2,619,000 | \$2,619,000 | -\$1,488,000 |
| Reliability Upgrade | 1a | 1049 | United Illuminating Company | | 12/2010 | | East Shore 115 kV Capacitor Bank Transient Recovery | Planned | Planned | NR | NR | \$3,000,000 | \$4,050,000 | \$4,050,000 | \$1,050,000 |
| Reliability Upgrade | 1a | 582 | Northeast Utilities | | 12/2010 | | Separate 310 and 368 345-kV lines and create 368/1767 DCT | Planned | Planned | 7/18/2008 | No | \$16,000,000 | \$16,000,000 | \$16,000,000 | \$0 |
| Reliability Upgrade | 1a | 1112 | United Illuminating Company | | 12/2010 | | Water Street 115kV circuit breaker and switch replacements. | Planned | Planned | NR | NR | \$1,000,000 | \$2,840,000 | \$2,840,000 | \$1,840,000 |
| Reliability Upgrade | 1a | 809 | Northeast Utilities | | 12/2010 | | Upgrade terminal equipment at Bunker Hill 115 kV substation. | Proposed | Under Construction | NR | NR | \$1,000,000 | \$516,000 | \$516,000 | -\$484,000 |
| Reliability Upgrade | 1a | 1147 | Northeast Utilities | | 2011 | | Waterside Substation - install a three-breaker 115kV ring bus | Proposed | Planned | 9/29/2009 | NR | \$4,000,000 | \$5,055,000 | \$5,055,000 | \$1,055,000 |
| Reliability Upgrade | 1a | 1148 | Northeast Utilities | | 2011 | | Add a 2nd high speed relay on the Glennbrook to Waterside 115kV 1440 | Proposed | Planned | 9/29/2009 | NR | \$600,000 | Part of Project #1147 | Part of Project #1147 | |
| Reliability Upgrade | 1a | 974 | United Illuminating Company | | 04/2013 | | East Shore 115 kV Oil Circuit Breaker & Disconnect Replacements. | Planned | Planned | NR | No | \$6,700,000 | \$6,700,000 | \$6,700,000 | \$0 |
| Reliability Upgrade | 1a | 816 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | North Bloomfield 2A Substation Expansion - add a second 345/115-kV autotransformer | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | |
| Reliability Upgrade | 1a | 1054 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Greater Springfield Reliability Project) | Manchester - Meekville Jct. line (395/1448) separation. | Planned | Planned | 9/24/2008 | No | \$14,000,000 | \$14,000,000 | \$14,000,000 | \$0 |
| Reliability Upgrade | 1a | 576 | Northeast Utilities | | 12/2013 | NEEWS (Central Connecticut Reliability Project) | Build new 345kV line (3208) North Bloomfield to Frost Bridge. | Planned | Planned | 9/24/2008 | No | \$313,000,000 | \$313,000,000 | \$313,000,000 | \$0 |
| Reliability Upgrade | 1a | 1114 | Northeast Utilities | | 12/2013 | NEEWS (Central Connecticut Reliability Project) | Frost Bridge 18R substation expansion - add a 345/115kV autotransformer. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Central Connecticut Reliability Project) | Part of NEEWS (Central Connecticut Reliability Project) | Part of NEEWS (Central Connecticut Reliability Project) | |
| Reliability Upgrade | 1a | 814 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Central Connecticut Reliability Project) | Reconductor a portion of the Manchester to Scovill Rock 353 345-kV line and terminal work. | Planned | Planned | 9/24/2008 | No | \$9,000,000 | \$9,000,000 | \$9,000,000 | \$0 |
| Reliability Upgrade | 1a | 802 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Build new 345kV line (3271) Card to Lake Road | Planned | Planned | 9/24/2008 | No | \$251,000,000 | \$251,000,000 | \$251,000,000 | \$0 |
| Reliability Upgrade | 1a | 1084 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Loop the Millstone - Manchester (310) 345 kV line into the Card substation. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 1085 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Card 11F substation expansion | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|-----------------------------|--|---------------------------------|--|--|--------------------|--------------------|----------------------|--------------|--|--|--|--------------|
| Reliability Upgrade | 1a | 1086 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to 115kV line 1704, SW Hartford to South Meadow | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 1087 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to line 115kV 1722 SW Hartford NW Hartford | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 1088 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to 115kV line 1786, East Hartford to Riverside to South Meadow | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 1089 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Killingly 3G substation 345kV breaker addition | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 1090 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Millstone 15G substation breaker 14T upgrade 50kA | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 1091 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Southington 4C substation breaker 19T upgrade to 63kA | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 810 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Lake Road 27E 345 kV substation expansion | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 191 | Northeast Utilities | National Grid, USA | 12/2013 | NEEWS (Interstate Reliability Project) | Build Lake Road to Connecticut/Rhode Island border (341) 345-kV line (to West Farnum). | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) | |
| Reliability Upgrade | 1a | 807 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Interstate Reliability Project) | Install 480 MVAR's of capacitors at the Montville 345 kV substation | Planned | Planned | 9/24/2008 | No | \$33,000,000 | \$33,000,000 | \$33,000,000 | \$0 |
| Reliability Upgrade | 1a | 1092 | Northeast Utilities | | 12/2013 | NEEWS (BPS) ² | Upgrade the Card 115 kV, East Hartford 115 kV, Agawam 115 kV, Barbour Hill 115 kV, and North Bloomfield 345 kV Substations to BPS standards. | Planned | Planned | 9/24/2008 | No | \$37,000,000 | \$37,000,000 | \$37,000,000 | \$0 |
| Reliability Upgrade | 1a | 1056 | Northeast Utilities | | 12/2011 | CT LSP - Sherwood Substation | Sherwood Substation - add a 115/13.8-kV substation with two transformers and a 115-kV circuit breaker. | Planned | Planned | 12/12/2008 | No | \$9,751,000 | \$10,969,000 | \$10,969,000 | \$1,218,000 |
| Reliability Upgrade | 1a | 1110 | United Illuminating Company | | 12/2010 | | Broadway 115/13.8 kV Substation Addition | Planned | Under Construction | 12/8/2008 | NR | \$1,200,000 | \$1,200,000 | \$1,200,000 | \$0 |
| Reliability Upgrade | 1a | 1111 | United Illuminating Company | | 8/2011 | | Metro North Union Avenue 115/26.4 kV Substation | Planned | Planned | 1/7/2009 | 11/10/2009 | \$10,543,000 | \$10,543,000 | \$10,543,000 | \$0 |
| Reliability Upgrade | 1a | 976 | United Illuminating Company | | 05/2012 | | Grand Avenue 115 kV Switching Station Rebuild. | Planned | Planned | 1/7/2009 | No | \$48,000,000 | \$66,000,000 | \$66,000,000 | \$18,000,000 |
| Reliability Upgrade | 1a | 721 | United Illuminating Company | | 06/2016 | | New Shelton 115/13.8 kV substation | Proposed | Planned | 11/5/2009 | No | \$11,300,000 | \$19,500,000 | \$19,500,000 | \$8,200,000 |
| Reliability Upgrade | 1a | 879 | | Bangor Hydro-Electric Company, New England Power Company, Northeast Utilities System Com | TBD | Dynamic Swing Reorder Project | Upgrade 7 of 8 Dynamic Swing Recorders in New England to comply with NERC, NPCC, and ISO-NE Standards. | Planned | Planned | 03/01/2007 | NR | \$420,000 | \$420,000 | \$420,000 | \$0 |
| Generator Interconnection Upgrade | 2a | 983 | Northeast Utilities | | 09/2012 | Queue Position 207/241 | Rebuild 115 kV 1585N Line between new substation and Bunker Hill. | Proposed | Proposed | 9/26/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1107 | Northeast Utilities | | 09/2012 | Queue Position 207/241 | Interconnection to new 115 kV substation consisting of (14) circuit breakers in a breaker and a half configuration that sectionalizes the existing 1575, 1585, and 1990 lines. | Proposed | Proposed | 9/26/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1108 | Northeast Utilities | | 09/2012 | Queue Position 207/241 | Installation of a 2.5% series reactor on the 1990S Line at the new substation. | Proposed | Proposed | 9/26/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 331 | Northeast Utilities | | TBD | Kleen Energy | Install 5-breaker ring bus interconnecting between Scovill Rock and Manchester on the 345 kV 353 Line. | Under Construction | See Note (5) | 10/08/2003 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1121 | Northeast Utilities | | 06/2010 | Queue Position 161-2 | Four units connected to 384 line through a new 345kV Substation: unit #4 will also connect to Substation | Planned | Planned | 12/8/2008 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1149 | Northeast Utilities | | 06/2010 | Queue Position 161-1 | Four units connected at Devon Substation | Under Construction | Under Construction | 12/8/2007 | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2a | 1122 | Northeast Utilities | | 11/2010 | Queue Position 191 | One turbine connected to #1238 Line (Frost Bridge to Carmel) via a new 3-breaker ring bus Substation | Proposed | Proposed | 2/24/2009 | NR | NR | NR | NR | |
| Reliability Upgrade | 1a | 1050 | United Illuminating Company | | 12/2011 | | Devon Tie 115kV Switching Station BPS Compliance | Planned | Planned | NR | NR | \$2,620,000 | \$3,240,000 | \$3,240,000 | \$620,000 |
| TABLE B | | | | | | | | | | | | | | | |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|--------------------------------|--------------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|--------------|--------------|
| MAINE | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 148 | Central Maine Power Company | | 06/2012 | CMP LSP - Saco Bay Area Reinforcement Project | Establish a new Vallee Lane 115/34.5 kV substation and 115 kV line from Loudon S/S to Vallee Lane Substation. | Proposed | Proposed | No | NR | \$100,000 | \$100,000 | \$100,000 | \$0 |
| Reliability Upgrade | 1b | 1116 | Bangor Hydro-Electric Company | | 12/2011 | Maine Power Reliability Program (MPRP) | L 64 Rebuild | Concept | Proposed | No | No | TBD | \$37,126,000 | \$37,126,000 | \$37,126,000 |
| Reliability Upgrade | 1b | 1031 | Bangor Hydro-Electric Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Rebel Hill Switching Station | Concept | Concept | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 1154 | Bangor Hydro-Electric Company | | 12/2013 | Maine Power Reliability Program (MPRP) | Rebuild Line 66 | | Concept | No | No | | TBD | TBD | |
| Reliability Upgrade | 1b | 1155 | Bangor Hydro-Electric Company | | 12/2013 | Maine Power Reliability Program (MPRP) | Capacitor Bank Addition (10 MVAR at Trenton and Epping) | | Concept | No | No | | TBD | TBD | |
| Reliability Upgrade | 1b | 1156 | Bangor Hydro-Electric Company | | 12/2011 | Maine Power Reliability Program (MPRP) | Orrington Shunt Cap Reconfiguration | | Concept | No | No | | TBD | TBD | |
| Reliability Upgrade | 1b | 1157 | Bangor Hydro-Electric Company | | 12/2010 | | Bangor Hydro Synchrophasors | | Concept | No | No | | \$100,000 | \$100,000 | \$100,000 |
| Reliability Upgrade | 1b | 1130 | Central Maine Power Company | | 12/2011 | Sturtevant Improvements | Add 115kV circuit breakers & 25 MVAR capacitor bank at Sturtevant Substation; Re-rate Section 63 between Wyman Hydro & Madison Substation | Proposed | Proposed | 7/28/2009 | No | | \$3,000,000 | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1b | 1131 | Central Maine Power Company | | 12/2011 | CMP-LSP Bowman St. Substation | Add 115/34kV transformer | Proposed | Proposed | No | NR | \$600,000 | \$600,000 | \$600,000 | \$0 |
| Reliability Upgrade | 1b | 1132 | Central Maine Power Company | | 12/2011 | CMP-LSP Maxcy's Substation | Add 115/34kV transformer (coordinate with MPRP) | Proposed | Proposed | No | NR | \$600,000 | \$600,000 | \$600,000 | \$0 |
| Reliability Upgrade | 1b | 1133 | Central Maine Power Company | | 10/2010 | CMP-LSP Leeds Substation | Add 115/34kV Leeds Substation & new 34kV line from Leeds to Turner | Proposed | Proposed | No | NR | \$300,000 | \$300,000 | \$300,000 | \$0 |
| Reliability Upgrade | 1b | 1135 | Central Maine Power Company | | TBD | CMP-Athens Substation LSP | Add two 115kV circuit breakers on Section 66; and 115/12kV transformer | Proposed | Proposed | No | No | \$1,500,000 | \$1,500,000 | \$1,500,000 | \$0 |
| Elective | 4b | 1018 | Bangor Hydro-Electric Company | NSTAR | TBD | QP-283 | HVDC between Orrington, ME and Boston, MA | Concept | Concept | No | No | TBD | TBD | TBD | |
| Elective | 4b | 1160 | Central Maine Power Company | | TBD | QP-278 | 1000 MW HVDC between Maine Yankee, ME and South Boston, MA | | Concept | No | No | | TBD | TBD | |
| Elective | 4b | 1163 | Maine Electric Power Company | | TBD | QP-322 | 345kV Tie Line - between Houlton, ME and MEPCO Line | | Concept | No | No | | TBD | TBD | |
| Elective | 4b | 1164 | Maine Electric Power Company | | TBD | QP-324 | 345kV Tie Line - between Bridgewater, ME and MEPCO Line | | Concept | No | No | | TBD | TBD | |
| NEW HAMPSHIRE | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 1143 | Northeast Utilities | | TBD | | Littleton 115kV breaker addition and reconfiguration | Proposed | Proposed | No | No | \$5,338,000 | \$6,642,000 | \$6,642,000 | \$1,304,000 |
| VERMONT | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 318 | Vermont Electric Power Company | | 12/2011 | | Rebuild the existing Georgia substation 115 kV bus into a ring bus to address reliability problems through the 1,250 MW Vermont state load level. | Concept | Concept | No | No | \$9,000,000 | \$9,000,000 | \$9,000,000 | \$0 |
| Reliability Upgrade | 1b | 325 | Vermont Electric Power Company | | 12/2011 | VELCO LSP - Chelsea Substation | Replace (2) SCADA controlled motorized disconnect switches with 115 kV circuit breakers at the existing Chelsea substation to maintain adequate supply to the load. | Concept | Concept | No | No | \$5,000,000 | \$5,000,000 | \$5,000,000 | \$0 |
| Reliability Upgrade | 1b | 324 | Vermont Electric Power Company | | TBD | | Granite to Middlesex 230-kV line with necessary substation upgrades to mitigate several reliability concerns, including those related to the potential Highgate contract termination. | Concept | Concept | No | No | \$100,000,000 | TBD | TBD | #VALUE! |
| Generator Interconnection Upgrade | 2b | 1037 | Vermont Electric Power Company | Central Vermont Public Service | 12/2010 | Queue Position 276 | Installation of 3-breaker 115kV ring bus interconnection of the Bennington-Searsburg 69kV Y25N line. | | Concept | No | NR | | NR | NR | |
| Generator Interconnection Upgrade | 4b | 1162 | Vermont Electric Power Company | | TBD | OP-314 | 345/230 kV DC line between Plattsburg, NY and New Haven, CT | | Concept | No | NR | | NR | NR | |
| MASSACHUSETTS | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 785 | National Grid, USA | | 07/2017 | Merrimack Valley/North Shore Reliability Project | Re-conductor F-158N (Golden Hills-Maplewood-Everett) 115 kV line. | Concept | Concept | No | No | \$1,330,000 | \$1,330,000 | \$1,330,000 | \$0 |
| Reliability Upgrade | 1b | 1153 | NSTAR Electric Company | | 12/2011 | Boston Area 115 kV Enhancements | Reliability Upgrades at West Framingham Station | Concept | Concept | No | No | \$3,000,000 | \$3,000,000 | \$3,000,000 | \$0 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|-----------------------------|--------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|--------------|--------------|
| Reliability Upgrade | 1b | 843 | NSTAR Electric Company | | 12/2013 | Boston Area 115 kV Enhancements | Install (2) new 115 kV breakers at Trapelo Road. | Concept | Concept | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 965 | NSTAR Electric Company | | 12/2012 | Boston Area 115 kV Enhancements | Add third 115kV line from W. Walpole to Holbrook | Concept | Concept | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 964 | NSTAR Electric Company | | 06/2011 | Boston Area 115 kV Enhancements | Relocate 115kV terminals at W. Walpole to mitigate breaker failure #8. | Proposed | Proposed | No | No | \$5,600,000 | \$5,600,000 | \$5,600,000 | \$0 |
| Reliability Upgrade | 1b | 969 | NSTAR Electric Company | | 06/2015 | Boston Area 115 kV Enhancements | Add a new 54 MVAR capacitor bank at Chelsea. | Concept | Concept | No | No | \$1,200,000 | \$2,780,000 | \$2,780,000 | \$1,580,000 |
| Reliability Upgrade | 1b | 301 | NSTAR Electric Company | | 12/2011 | Boston Area 115 kV Enhancements | Reconductor 115-kV circuits 320-507 and 320-508. | Concept | Concept | No | No | \$4,600,000 | \$4,600,000 | \$4,600,000 | \$0 |
| Reliability Upgrade | 1b | 593 | NSTAR Electric Company | | 2013 | Mid Cape Reliability Project | Add a new 115 kV line from Canal to Barnstable/Falmouth | Concept | Concept | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 970 | NSTAR Electric Company | | 12/2012 | Greater Boston Reliability Project | Add a new 345 kV line from Lexington to Waltham. | Concept | Concept | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 971 | NSTAR Electric Company | | 12/2012 | Greater Boston Reliability Project | Add a new 345/230 kV auto at Waltham and 230 kV switching facilities. | Concept | Concept | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 1166 | NSTAR Electric Company | | 12/2010 | | Terminal upgrades at W. Walpole and W. Medway for #325 line | | Proposed | NR | NR | | \$1,350,000 | \$1,350,000 | \$1,350,000 |
| Reliability Upgrade | 1b | 1167 | NSTAR Electric Company | | 12/2010 | | Replace three 40kA 115kV circuit breakers at Carver with 63kV breakers | | Concept | No | No | | \$850,000 | \$850,000 | \$850,000 |
| Reliability Upgrade | 1b | 956 | National Grid, USA | | 01/2015 | Central/Western Massachusetts Upgrades | Carpenter Hill - replace one 345 kV, 448 MVA autotransformer and upgrade thermal rating of bus to at least 580 MVA. | Concept | Concept | No | No | \$7,021,534 | \$7,021,534 | \$7,021,534 | \$0 |
| Reliability Upgrade | 1b | 1136 | National Grid, USA | | 12/2012 | | New 115kV Switching Station at Devens Convert 69kV lines to 115kV, Reconfigure 115kV Supply at Ayer Substation | Proposed | Proposed | 7/28/2009 | No | \$9,200,000 | \$9,200,000 | \$9,200,000 | \$0 |
| Reliability Upgrade | 1b | 824 | Northeast Utilities | | TBD | Pittsfield / Greenfield Project | Reconductor the Woodland to Pleasant 1371 115-kV line and terminal work at Woodland substation. | Concept | Concept | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 1168 | Holyoke Gas & Electric | | TBD | | Loop/extend the 1525 (Holyoke Fairmont South 115kV) line into the new Lyman Substation | | Concept | No | No | | TBD | TBD | |
| Reliability Upgrade | 1b | 825 | Northeast Utilities | | TBD | Pittsfield / Greenfield Project | Upgrade the Pleasant to Blanford 115-kV line and the Blanford to Granville Jct. portion of the 115-kV line 1512. | Concept | Concept | No | No | TBD | TBD | TBD | |
| Generator Interconnection Upgrade | 2b | 1123 | Northeast Utilities | | TBD | Queue Position 236 | New Substation on 1302 Line; terminal upgrades at Buck Pond and Agawam | Concept | Concept | No | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2b | 880 | National Grid, USA | Northeast Utilities | 06/2011 | Queue Position 177 | Sutton Energy - 345 kV Carpenter Hill-Millbury Line. | Concept | Concept | No | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2b | 1042 | National Grid, USA | | 06/2013 | Queue Position 165 | Replace (2) 345 kV circuit breakers at Sandy Pond | Concept | Concept | No | NR | NR | NR | NR | |
| RHODE ISLAND | | | | | | | | | | | | | | | |
| Generator Interconnection Upgrade | 2b | 881 | National Grid, USA | Northeast Utilities | 06/2012 | Queue Position 201 | RISEP - 345 kV RISE Substation. | Concept | Concept | No | NR | NR | NR | NR | |
| CONNECTICUT | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 1150 | United Illuminating Company | | 12/2010 | | Grand Avenue - West River 115 kV Pumping Plant Replacements | Proposed | Proposed | NR | NR | \$1,200,000 | \$2,900,000 | \$2,900,000 | \$1,700,000 |
| Reliability Upgrade | 1b | 1151 | United Illuminating Company | | 12/2011 | | West River 115kV Switching Station Fault Duty Migration | Proposed | Proposed | NR | NR | \$3,500,000 | \$3,500,000 | \$3,500,000 | \$0 |
| Reliability Upgrade | 1b | 975 | United Illuminating Company | | 06/2015 | | Pequonock 115 kV Fault Duty Mitigation. | Concept | Concept | No | No | \$44,300,000 | \$65,000,000 | \$65,000,000 | \$20,700,000 |
| Reliability Upgrade | 1b | 699 | United Illuminating Company | | 12/2014 | | Naugatuck Valley 115 kV reliability improvement. | Concept | Concept | No | No | \$10,000,000 | \$11,100,000 | \$11,100,000 | \$1,100,000 |
| Reliability Upgrade | 1b | 801 | Northeast Utilities | | TBD | | Build Manchester to East Hartford 115-kV cable with a series reactor. | Concept | Concept | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 85 | Northeast Utilities | | TBD | | Upgrade the South Meadow Substation to Bulk Power System standards (BPS). | Concept | Concept | 08/04/2004 | No | TBD | TBD | TBD | |
| Generator Interconnection Upgrade | 2b | 1124 | Northeast Utilities | | TBD | Queue Position 222 | New Substation on Haddam Neck-Southington 345kV line | Proposed | Proposed | No | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2b | 1125 | Northeast Utilities | | TBD | Queue Position 240 | 345kV on Montville Substation | Concept | Concept | No | NR | NR | NR | NR | |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|--------------------------------|--------------------------|---------------------------------|---|---|--------------------|---------------|----------------------|--------------|---------------------------------|---------------------------------|---------------------------------|----------------|
| Generator Interconnection Upgrade | 4b | 1161 | United Illuminating Company | | TBD | Queue Position 271 | 1000 MW HVDC between Hertel, QC or Clay NY and Singer, CT | | Concept | No | NR | | NR | NR | |
| IN-SERVICE PROJECTS | | | | | | | | | | | | | | \$5,189,345,881 | #VALUE! |
| Reliability Upgrade | 1a | 320 | Vermont Electric Power Company | | 10/2009 | Lamoille County Project | Middlesex Substation 115 kV breaker addition. | Under Construction | In-service | 08/16/2007 | 02/07/2008 | \$4,857,000 | \$4,857,000 | \$4,857,000 | \$0 |
| Reliability Upgrade | 1a | 322 | Vermont Electric Power Company | | 10/2009 | Lamoille County Project | Installation of new Duxbury Substation that involves looping in and out of the Middlesex - Essex 115 kV (K24) line. | Under Construction | In-service | 08/16/2007 | 02/07/2008 | Part of Lamoille County Project | Part of Lamoille County Project | Part of Lamoille County Project | |
| Reliability Upgrade | 1a | 321 | Vermont Electric Power Company | | 11/2009 | Burlington Project | Burlington 115kV Loop - 5 mi of new line & rebuilding 5 miles of existing line between two existing substations with expansion of the East Avenue substation. | Under Construction | In-service | 10/24/2006 | 05/23/2007 | \$25,142,000 | \$25,142,000 | \$25,142,000 | \$0 |
| Reliability Upgrade | 1a | 1063 | NSTAR Electric Company | | 12/2009 | | Install (2) 115kV 40 MVAR shunt reactors at Edgar Station | Under Construction | In-service | 05/2009 | No | \$5,400,000 | \$3,745,000 | \$3,745,000 | -\$1,655,000 |
| Reliability Upgrade | 1a | 777 | National Grid, USA | | 11/2009 | Merrimack Valley/North Shore Reliability Project | Build Wakefield Junction station with four 345/115 kV autotransformers. | Under Construction | In-service | 4/1/2008 | No | \$95,000,000 | \$95,000,000 | \$95,000,000 | \$0 |
| Reliability Upgrade | 1a | 161 | National Grid, USA | | 11/2009 | Merrimack Valley/North Shore Reliability Project | Loop 345 kV 339 line and 115 kV S-145/T-146 into new Wakefield Jct. Substation. | Under Construction | In-service | 4/1/2008 | No | \$4,986,431 | \$5,406,900 | \$5,406,900 | \$420,469 |
| Reliability Upgrade | 1a | 961 | NSTAR Electric Company | | 12/2009 | Mystic Breaker Additions Project | Install (2) new 115 kV East Bus breakers #30 and #32 at Mystic. | Under Construction | In-service | 3/10/2008 | No | \$3,800,000 | \$3,689,000 | \$3,689,000 | -\$111,000 |
| Reliability Upgrade | 1a | 903 | NSTAR Electric Company | | 12/2009 | Mystic IPT Breaker Project | Upgrade (4) 115 kV breakers #2, #4, #5, and #16 at Mystic to IPT and separate controls with Boston Gen units #5 and #6. | Under Construction | In-service | NR | NR | \$1,240,000 | \$1,576,000 | \$1,576,000 | \$336,000 |
| Reliability Upgrade | 1a | 930 | National Grid, USA | | 11/2009 | Central/Western Massachusetts Upgrades | Reconductor Nashua St - Quinsigamond Jct (O141) 115 kV line w/636 ACSS. | Under Construction | In-service | 12/17/2007 | No | \$2,300,000 | \$2,300,000 | \$2,300,000 | \$0 |
| Reliability Upgrade | 1a | 933 | National Grid, USA | | 01/2010 | Central/Western Massachusetts Upgrades | Reconductor Pratts Jct - Flagg Pond I-135S & J-136S 115 kV lines w/795 ACSS. | Under Construction | In-service | 12/17/2007 | No | \$6,137,112 | \$11,200,000 | \$11,200,000 | \$5,062,888 |
| Reliability Upgrade | 1a | 211 | Northeast Utilities | | 11/2009 | NU LSP - Rood Ave Substation | New Rood Ave (formally Windsor) distribution substation with 115kV terminal modifications. | Under Construction | In-service | 4/25/2008 | 02/15/2008 | \$9,162,029 | \$8,681,000 | \$8,681,000 | -\$481,029 |
| Reliability Upgrade | 1a | 789 | National Grid, USA | | 12/2009 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Reconductoring of T7 115 kV line. | Planned | In-service | 4/25/2008 | No | \$23,304,000 | \$23,304,000 | \$23,304,000 | \$0 |
| Reliability Upgrade | 1b | 963 | NSTAR Electric Company | | 12/2009 | Boston Area 115 kV Enhancements | Add a new 115kV breaker # 11 Relocate 447-509 and add control and protection at Holbrook. | Proposed | In-service | 8/19/2009 | NR | \$4,000,000 | \$1,276,800 | \$1,276,800 | -\$2,723,200 |
| Generator Interconnection Upgrade | 2b | 863 | Northeast Utilities | | 2008 | Queue Position 217 | Northfield Mountain 345 kV replace generator step-up transformer (1X) and associated generator equipment. | Proposed | In-service | 4/25/2008 | NR | NR | NR | NR | |
| Reliability Upgrade | 1a | 1051 | Central Maine Power Company | | 09/2009 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Riley 115 kV capacitor bank. | In-service | In-service | 11/30/2007 | No | Part of Project 625 | Part of Project 625 | Part of Project 625 | |
| Generator Interconnection Upgrade | 2a | 1134 | Central Maine Power Company | | 09/2009 | Kibby Wind Farm | Separate Section 215 from Section 63 and terminate Section 215 at newly established breaker position in Wyman Hydro S/S, which includes re-rating of Section 215. Expand Bigelow S/S & add capacitor banks at Lakewood, Guilford, Wyman Hydro Station & Sturtevant S/S's. | In-service | In-service | 6/16/2006 | NR | NR | NR | NR | |
| Reliability Upgrade | 1a | 579 | Central Maine Power Company | | 06/2008 | Maguire Road Project | Addition of (4) 345 kV breakers at Buxton. | | | 03/01/2007 | No | | | #TBDs | \$17 |
| Reliability Upgrade | 1a | 587 | Northeast Utilities | | 5/13/2008 | | Install third 345/115-kV autotransformer at Scobie Substation. | | | 07/01/2007 | No | | | | |
| Reliability Upgrade | 1a | 282 | Northeast Utilities | | 5/26/2008 | NU LSP - Weare Substation | Install new 115 kV Weare Street Substation and Jackman capacitors. | | | 03/01/2007 | 05/01/2007 | | | | |
| Reliability Upgrade | 1a | 580 | Northeast Utilities | | 5/30/2008 | Scobie Pond to Hudson Reinforcement Project | Install new 115-kV Scobie - Hudson line. | | | 07/31/2006 | No | | | | |
| Reliability Upgrade | 1a | 685 | National Grid, USA | | 03/2008 | | New 345 kV gas circuit breaker at Auburn St. Substation on the 335 Line. | | | 10/01/2006 | 10/01/2006 | | | | |
| Reliability Upgrade | 1a | 293 | NSTAR Electric Company | | 04/2008 | | Upgrade Canal 345-kV breaker #612 to IPT. | | | NR | NR | | | | |
| Reliability Upgrade | 1a | 56 | Bangor Hydro-Electric Company | | 12/2007 | Northeast Reliability Interconnect Project | Point Lepreau to Orrington - New 345 kV line as well as capacity expansion from Orrington to Maine Yankee. | In-service | In-service | 03/01/2003 | 09/28/2007 | \$144,000,000 | \$144,000,000 | | |
| Reliability Upgrade | 1a | 154 | Central Maine Power Company | Northeast Utilities | 8/2008 | Maguire Road Project | Rebuild Loudon - Maguire Road 115 kV Line S163. | In-Service | In-Service | 03/01/2007 | No | \$7,000,000 | \$7,000,000 | | |
| Reliability Upgrade | 1a | 715 | Central Maine Power Company | | 8/2008 | Maguire Road Project | Rebuild South Gorham to Loudon 115 kV Line S219. | In-Service | In-Service | 03/01/2007 | No | \$4,900,000 | \$4,900,000 | #TBDs | \$17 |

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---------------------|-------|------------|-----------------------------|-----------------------------|---------------------------------|--|--|---------------|---------------|----------------------|--------------|---------------------------------|---------------------------------|--------------|-------|
| Reliability Upgrade | 1a | 716 | Central Maine Power Company | | 8/2008 | Maguire Road Project | Reconductor South Gorham to Louden 115 kV Line S220. | In-Service | In-Service | 03/01/2007 | No | \$2,500,000 | \$2,500,000 | | |
| Reliability Upgrade | 1a | 149 | Central Maine Power Company | | 8/2008 | Maguire Road Project | Convert Maguire Road to a switching substation by replacing switches with breakers. | In-Service | In-Service | 03/01/2007 | No | \$17,700,000 | \$17,700,000 | | |
| Reliability Upgrade | 1a | 717 | Central Maine Power Company | | 8/2008 | Maguire Road Project | Install a 115 kV 50 MVAR capacitor bank at Maguire Road. | In-Service | In-Service | 03/01/2007 | No | Portion of \$17,700,000 (above) | Portion of \$17,700,000 (above) | | |
| Reliability Upgrade | 1a | 155 | Central Maine Power Company | Northeast Utilities | 01/2009 | Maguire Road Project | Rebuild Three Rivers - Quaker Hill 115 kV Line K197. | In-Service | In-Service | 03/01/2007 | 1/9/2009 | \$5,500,000 | \$5,500,000 | | |
| Reliability Upgrade | 1a | 461 | Central Maine Power Company | | 12/2007 | MEPCO SPS | Redesign/replacement of the Maxcy's Cross Trip and Bucksport Overcurrent Type 1 Special Protection Systems. | In-service | In-service | 03/24/2006 | No | \$4,700,000 | \$4,700,000 | | |
| Reliability Upgrade | 1a | 147 | Central Maine Power Company | | 02/2008 | Raymond Substation Project | Add 115/34.5 kV transformer at Raymond Substation on Section 208/209 along with (2) 115 kV in-line circuit breakers. | In-service | In-service | 06/01/2006 | No | \$1,523,000 | \$1,523,000 | | |
| Reliability Upgrade | 1a | 627 | Central Maine Power Company | | 12/2007 | Rumford-Woodstock-Kimball Road Corridor Project | Reterminate (3) 115 kV lines and add (2) bus-tie breakers at Kimball Road. | In-service | In-service | 11/30/2007 | 3/31/2008 | \$2,441,000 | \$2,441,000 | | |
| Reliability Upgrade | 1a | 910 | Central Maine Power Company | | 12/2008 | Rumford-Woodstock-Kimball Road Corridor Project | Rebuild Section 211 Woodstock - Rumford. | In-Service | In-Service | 11/30/2007 | No | \$8,400,000 | \$8,400,000 | | \$0 |
| Reliability Upgrade | 1a | 626 | Central Maine Power Company | | 04/2009 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of 115/34.5 kV transformer and six new 115 kV breakers and a half substation at Woodstock. | In-service | In-service | 11/30/2007 | No | \$8,000,000 | \$8,000,000 | \$8,000,000 | \$0 |
| Reliability Upgrade | 1a | 575 | Central Maine Power Company | | 05/2009 | Heywood Road Project | New Heywood Rd 115kV switchyard with (6) 115kV circuit breakers (3) 115kV line retensionings and 115kV 20 MVAR capacitor bank at Heywood Rd. | In-service | In-service | 3/20/2009 | 7/20/2009 | \$7,000,000 | \$7,000,000 | \$7,000,000 | \$0 |
| Reliability Upgrade | 1a | 1127 | Central Maine Power Company | | 05/2009 | CMP-LSP Newcastle Substation | Add 115/34kV transformer with two 115kV breakers | In-service | In-service | 8/20/2008 | 8/20/2008 | \$1,300,000 | \$1,300,000 | \$1,300,000 | \$0 |
| Reliability Upgrade | 1a | 267 | Northeast Utilities | Central Maine Power Company | 8/2009 | Y138 Closing | White Lake - Saco Valley (Y138) Line Closing - Add PAR on Y138 at Saco Valley, retension lines, upgrade Beebe terminal, and add capacitor banks at White Lake and Beebe. | In-service | In-service | 01/01/2006 | No | \$27,775,000 | \$27,775,000 | \$27,775,000 | \$0 |
| Reliability Upgrade | 1a | 936 | National Grid, USA | | 07/2009 | Central/Western Massachusetts Upgrades | Reconductor (P142/P142S) Rolfe Avenue - West Bolyston 115 kV line w/1590 ACSR. | In-service | In-service | 12/17/2007 | No | \$3,000,000 | \$3,000,000 | \$3,000,000 | \$0 |
| Reliability Upgrade | 1a | 923 | National Grid, USA | | 12/2008 | Auburn Area Transmission System Upgrades | Reconductor 115 kV A94 line and associated substation upgrades. | In-Service | In-Service | 1/28/2008 | No | \$2,400,000 | \$2,400,000 | | \$0 |
| Reliability Upgrade | 1a | 922 | National Grid, USA | | 02/2009 | Auburn Area Transmission System Upgrades | Reconductor 115kV L1 line and associated substation upgrades. | In-Service | In-Service | 1/28/2008 | No | \$800,000 | \$800,000 | | \$0 |
| Reliability Upgrade | 1a | 543 | National Grid, USA | | 8/2008 | Greater Rhode Island Transmission Reinforcements | New Tower Hill Rd. Substation tapped off of (G185S) 115 kV line. | In-Service | In-Service | 4/25/2008 | No | \$2,400,000 | \$2,400,000 | | |
| Reliability Upgrade | 1a | 774 | National Grid, USA | | 10/2007 | Merrimack Valley/North Shore Reliability Project | Reconductor G-133W 115 kV line and replace terminal equipment at West Methuen. | In-service | In-service | 06/01/2007 | No | \$2,600,000 | \$2,600,000 | | |
| Reliability Upgrade | 1a | 778 | National Grid, USA | | 07/2008 | Merrimack Valley/North Shore Reliability Project | Reconductor S-145/T146 115 kV lines between Wakefield Jct. and Golden Hills Tap. | In-Service | In-Service | 4/1/2008 | No | \$3,220,000 | \$3,220,000 | | |
| Reliability Upgrade | 1a | 781 | National Grid, USA | | 10/2008 | Merrimack Valley/North Shore Reliability Project | Install 115 kV 30 MVAR capacitor bank at Revere. | In-Service | In-Service | 4/1/2008 | No | \$1,727,000 | \$1,727,000 | | \$0 |
| Reliability Upgrade | 1a | 169 | National Grid, USA | | 11/2007 | Southwest Rhode Island Reliability Enhancements | Reconductor W. Kingston - Kenyon 115 kV 1870N line. | In-Service | In-Service | 1/1/2005 | 03/29/2005 | \$3,500,000 | \$3,500,000 | | |
| Reliability Upgrade | 1a | 170 | National Grid, USA | | 03/2008 | Southwest Rhode Island Reliability Enhancements | Extend L-190 line to W. Kingston. | In-Service | In-Service | 11/10/2004 | 03/29/2005 | \$13,400,000 | \$13,400,000 | | |
| Reliability Upgrade | 1a | 173 | National Grid, USA | | 03/2008 | Southwest Rhode Island Reliability Enhancements | Rebuild W. Kingston to include 115 kV ring bus. | In-Service | In-Service | 11/10/2004 | 03/29/2005 | \$4,830,000 | \$4,830,000 | | |
| Reliability Upgrade | 1a | 168 | National Grid, USA | | 09/2008 | Southwest Rhode Island Reliability Enhancements | Reconductor Kenyon - Wood River 115 kV 1870 line. | In-Service | In-Service | 1/1/2005 | 03/29/2005 | \$2,234,232 | \$2,234,232 | | \$0 |
| Reliability Upgrade | 1a | 171 | National Grid, USA | | 10/2008 | Southwest Rhode Island Reliability Enhancements | Reconductoring L-190 between Kent Co. and Davisville. | In-Service | In-Service | 11/10/2004 | 03/29/2005 | \$2,666,291 | \$2,666,291 | | \$0 |
| Reliability Upgrade | 1a | 900 | National Grid, USA | | 11/2008 | Southwest Rhode Island Reliability Enhancements | Wood River substation upgrades. | In-Service | In-Service | 04/07/2007 | 05/07/2007 | \$130,000 | \$130,000 | | \$0 |

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---------------------|-------|------------|-------------------------|-----------------------------|---------------------------------|---|---|---------------|---------------|----------------------|--------------|--|--|--------------|----------------|
| Reliability Upgrade | 1a | 899 | National Grid, USA | | 12/2008 | Southwest Rhode Island Reliability Enhancements | Kenyon substation upgrades. | In-Service | In-Service | 04/07/2007 | 05/07/2007 | \$278,000 | \$278,000 | | |
| Reliability Upgrade | 1a | 594 | National Grid, USA | | 07/2008 | | Upgrade the Auburn 345 kV breaker #2130 with an IPT breaker. | In-Service | In-Service | 10/01/2006 | 10/01/2006 | \$720,000 | \$720,000 | | \$0 |
| Reliability Upgrade | 1a | 166 | National Grid, USA | | 06/2009 | | Replace (16) 115 kV breakers at Tewksbury 22. | In-service | In-service | NR | NR | \$3,300,000 | \$3,300,000 | \$3,300,000 | \$0 |
| Reliability Upgrade | 1a | 176 | Northeast Utilities | | 07/2009 | Monadnock Area Reliability Project | New Fitzwilliam 345/115kV substation along with 345 kV breakers. | In-service | In-service | 9/27/2007 | No | \$76,100,000 | \$76,100,000 | \$76,100,000 | \$0 |
| Reliability Upgrade | 1a | 174 | National Grid, USA | | 06/2009 | Monadnock Area Reliability Project | Reconductor I-135 (Bellows Falls-Monadnock Tap-Flagg Pond) 115 kV line. | In-service | In-service | 03/24/2006 | No | \$15,778,000 | \$15,778,000 | \$15,778,000 | \$0 |
| Reliability Upgrade | 1a | 179 | Northeast Utilities | | 02/2008 | Monadnock Area Reliability Project | Rebuild 115-kV Jackman to Greggs F-162 line. | In-service | In-service | 03/24/2006 | No | Portion of 54,358,000 (above) | Portion of 54,358,000 (above) | | |
| Reliability Upgrade | 1a | 177 | Northeast Utilities | | 12/2008 | Monadnock Area Reliability Project | Replace limiting terminal equipment at Webster Substation on line to North Road. | In-Service | In-Service | 03/24/2006 | No | Part of Monadnock Area Reliability Project | Part of Monadnock Area Reliability Project | | |
| Reliability Upgrade | 1a | 180 | Northeast Utilities | | 12/2008 | Monadnock Area Reliability Project | Rebuild 115 kV Keene to Swanzey A-152 line. | In-Service | In-Service | 03/24/2006 | No | Part of Monadnock Area Reliability Project | Part of Monadnock Area Reliability Project | | |
| Reliability Upgrade | 1a | 178 | Northeast Utilities | | 02/2009 | Monadnock Area Reliability Project | Rebuild 115 kV Garvins to Webster V-182 line. | In-Service | In-Service | 03/24/2006 | No | Part of Monadnock Area Reliability Project | Part of Monadnock Area Reliability Project | | |
| Reliability Upgrade | 1a | 569 | Northeast Utilities-CT | | 2007 | Norwalk-Glenbrook Cable Project | Replace two 115-kV circuit breakers at Cos Cob. | In-Service | In-Service | 08/01/2005 | No | Part of Norwalk-Glenbrook Cable Project ³ | Part of Norwalk-Glenbrook Cable Project ³ | | -\$500,000 |
| Reliability Upgrade | 1a | 243 | Northeast Utilities | | 09/2008 | Norwalk-Glenbrook Cable Project | Expand and upgrade to BPS and remove SPS at Glenbrook 115 kV substation. | In-Service | In-Service | 08/01/2005 | No | Part of Norwalk-Glenbrook Cable Project ³ | Part of Norwalk-Glenbrook Cable Project ³ | | -\$8,390,000 |
| Reliability Upgrade | 1a | 570 | Northeast Utilities | | 10/2008 | Norwalk-Glenbrook Cable Project | Add second high speed relay system on the 1450 line. | In-Service | In-Service | 08/01/2005 | No | Part of Norwalk-Glenbrook Cable Project ³ | Part of Norwalk-Glenbrook Cable Project ³ | | -\$788,000 |
| Reliability Upgrade | 1a | 571 | Northeast Utilities | | 12/2008 | Norwalk-Glenbrook Cable Project | Upgrade Flax Hill Substation to BPS. | In-Service | In-Service | 08/01/2005 | No | Part of Norwalk-Glenbrook Cable Project ³ | Part of Norwalk-Glenbrook Cable Project ³ | | -\$2,175,000 |
| Reliability Upgrade | 1a | 248 | Northeast Utilities | | 12/2008 | Norwalk-Glenbrook Cable Project | Install two new 115 kV cables from Norwalk to Glenbrook (accommodate 345 kV class cable). | In-Service | In-Service | 08/01/2005 | No | 249,372,000 ³ | 249,372,000 ³ | | -\$222,850,000 |
| Reliability Upgrade | 1a | 208 | Northeast Utilities | | 12/2008 | NU LSP - Oxford Substation | Install new Oxford (previously Jack's Hill) 115 kV substation. | In-Service | In-Service | 01/14/2006 | 06/01/2007 | \$4,459,000 | \$4,459,000 | | \$0 |
| Reliability Upgrade | 1a | 201 | Northeast Utilities | | 05/2008 | NU LSP - Wilton Substation | Install new 115 kV Wilton Substation. | In-Service | In-Service | 4/25/2008 | 08/01/2006 | \$3,915,000 | \$3,915,000 | | |
| Reliability Upgrade | 1a | 551 | Northeast Utilities | | 10/2007 | Southwest Connecticut Reliability Project PH II (M-N) | Rebuild the 1466 115-kV line from East Meriden to North Wallingford and the 1588 115-kV rebuild from North Wallingford to Colony. | In-service | In-service | 04/01/2007 | No | Part of SWCT (M-N) Reliability Project ⁴ | Part of SWCT (M-N) Reliability Project ⁴ | | -\$805,000 |
| Reliability Upgrade | 1a | 236 | Northeast Utilities | | 3/1/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Rebuild 115 kV lines (1640,1685,1610) between Devon and Cook Hill Jct. (UG section of 1640 near Cook Hill). | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project ⁴ | Part of SWCT (M-N) Reliability Project ⁴ | | |
| Reliability Upgrade | 1a | 228 | Northeast Utilities | | 3/19/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Installation of new Beseck Jct. 345 kV switching station in Wallingford. | In-Service | In-Service | 04/01/2007 | No | Part of SWCT (M-N) Reliability Project ⁴ | Part of SWCT (M-N) Reliability Project ⁴ | | |
| Reliability Upgrade | 1a | 222 | Northeast Utilities | | 3/27/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install new 345 kV line from Scovill Rock to Chestnut Jct. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project ⁴ | Part of SWCT (M-N) Reliability Project ⁴ | | |
| Reliability Upgrade | 1a | 223 | Northeast Utilities | United Illuminating Company | 3/28/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install (2) new 345 kV lines from Black Pond Jct. to Beseck Jct. | In-Service | In-Service | 02/01/2007 | No | Part of SWCT (M-N) Reliability Project ⁴ | Part of SWCT (M-N) Reliability Project ⁴ | | |
| Reliability Upgrade | 1a | 225 | Northeast Utilities | | 3/28/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install new 345 kV line from Oxbow Jct. to Beseck Jct. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project ⁴ | Part of SWCT (M-N) Reliability Project ⁴ | | |
| Reliability Upgrade | 1a | 237 | Northeast Utilities | | 4/28/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Rebuild 115-kV lines-1975 from Beseck to Oxbow Junction and 1655 from East Wallingford Jct. to New Haven Jct. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project ⁴ | Part of SWCT (M-N) Reliability Project ⁴ | | |
| Reliability Upgrade | 1a | 244 | Northeast Utilities | | 6/20/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Reconductor 115 kV 1570 and 1575 line taps into Beacon Falls Substation. | In-Service | In-Service | 4/25/2008 | No | Part of SWCT (M-N) Reliability Project ⁴ | Part of SWCT (M-N) Reliability Project ⁴ | | -\$5,692,000 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---------------------|-------|------------|-------------------------|-----------------------------|---------------------------------|---|--|---------------|---------------|----------------------|--------------|--|--|-------------|---------------|
| Reliability Upgrade | 1a | 239 | Northeast Utilities | | 07/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install (1) new 115 kV circuit breaker at Devon Substation in series with 7R-2T. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | -\$5,009,000 |
| Reliability Upgrade | 1a | 245 | Northeast Utilities | | 07/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Disconnect Milford Power from Devon Substation and reconnect to East Devon Jct. Substation. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | |
| Reliability Upgrade | 1a | 227 | Northeast Utilities | | 8/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install new 345 kV line from Besect Jct. to East Devon. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | |
| Reliability Upgrade | 1a | 229 | Northeast Utilities | United Illuminating Company | 8/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install new East Devon 345 kV substation and new East Devon 115 kV substation in Milford. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | |
| Reliability Upgrade | 1a | 232 | Northeast Utilities | | 09/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install two 115 kV circuits between East Devon and Devon. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | |
| Reliability Upgrade | 1a | 246 | Northeast Utilities | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Add second 345/115 kV autotransformer at Norwalk Substation along with shunt reactors and 345 kV circuit breakers. | In-Service | In-Service | 01/14/2006 | No | \$978,182,000 4 | \$978,182,000 4 | | \$0 |
| Reliability Upgrade | 1a | 226 | Northeast Utilities | United Illuminating Company | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install two 345 kV underground cables from Singer(UI) to Norwalk. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | |
| Reliability Upgrade | 1a | 235 | Northeast Utilities | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Expand Norwalk 345-kV substation and install transfer trip relaying scheme on the 1389 115 kV line between Norwalk and Flax Hill. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | |
| Reliability Upgrade | 1a | 247 | Northeast Utilities | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Replace Norwalk Harbor 138/115 kV autotransformer. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | -\$8,351,000 |
| Reliability Upgrade | 1a | 684 | Northeast Utilities | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Replace (6) 115 kV breakers (4-Glenbrook, 1-Glenbrook Statcom, 1-Southington #1) and (3) 345-kV circuit breakers at Millstone and replace (4) 345- kV breakers with 500-kV breakers at Long Mountain substation. | In-Service | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project 4 | Part of SWCT (M-N) Reliability Project 4 | | -\$11,321,000 |
| Reliability Upgrade | 1a | 202 | Northeast Utilities | | 05/2008 | | Install new 345/115 kV autotransformer at Barbour Hill Substation. | In-Service | In-Service | 09/30/2006 | 2/7/2008 | \$44,153,000 | \$44,153,000 | | |
| Reliability Upgrade | 1a | 104 | Northeast Utilities | | 07/2008 | | Replace 138-kV Norwalk (CT)-Northport(NY) 1385 cable. | In-Service | In-Service | 12/1/2002 | 6/1/2007 | \$71,743,727 | \$71,743,727 | | |
| Reliability Upgrade | 1a | 250 | Northeast Utilities | | 12/2008 | | Add a 345 kV breaker at Ludlow Substation. | In-service | In-service | 06/01/2007 | 8/1/2007 | \$1,644,885 | \$1,644,885 | | |
| Reliability Upgrade | 1a | 1009 | Northeast Utilities | | 05/2009 | | Install a 2% reactor on the North Bloomfield-Canton 115kV line and also replacement fo the Frostbridge 345/115kV autotransformer | In-service | In-service | 10/20/2007 | 10/16/2009 | \$3,089,000 | \$3,089,000 | \$3,089,000 | \$0 |
| Reliability Upgrade | 1a | 203 | Northeast Utilities | | 05/2009 | NU LSP - Stepstone Substation | Install new Stepstone 115 kV substation in Guilford. | In-service | In-service | 11/8/2005 | 4/24/2006 | \$6,332,000 | \$6,332,000 | \$6,332,000 | \$0 |
| Reliability Upgrade | 1a | 841 | NSTAR Electric Company | | 11/2008 | Mystic Breaker Additions Project | Install (2) new 115 kV West Bus breakers #29 and #31 at Mystic. | In-Service | In-Service | 3/10/2008 | No | \$2,300,000 | \$2,300,000 | | |
| Reliability Upgrade | 1a | 1040 | NSTAR Electric Company | | 12/2008 | Mystic IPT Breaker Project | Upgrade (4) 115 kV breakers #11, #8, #17 and #3 at Mystic to IPT | In-Service | In-Service | NR | NR | \$990,000 | \$990,000 | | |
| Reliability Upgrade | 1a | 116 | NSTAR Electric Company | | 04/2009 | NSTAR 345 kV Transmission Reliability Project | Add 2nd 345 kV UG Cables from Stoughton to Mattapan Sq.to K Street and install another new autotransformer at K. St. | In-Service | In-Service | 02/10/2005 | 09/15/2005 | \$307,900,000 | \$307,900,000 | | |
| Reliability Upgrade | 1a | 572 | NSTAR Electric Company | | 04/2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 345 kV 160 MVAR shunt reactors at Stoughton. | In-Service | In-Service | 02/10/2005 | 09/15/2005 | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project | | |
| Reliability Upgrade | 1a | 573 | NSTAR Electric Company | | 04/2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 345 kV 160 MVAR shunt reactors at K St. | In-Service | In-Service | 02/10/2005 | 09/15/2005 | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project | | |
| Reliability Upgrade | 1a | 772 | NSTAR Electric Company | | 04/2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 115 kV breaker at K St. | In-Service | In-Service | 02/01/2005 | 09/01/2005 | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project | | |
| Reliability Upgrade | 1a | 574 | NSTAR Electric Company | | 12/2007 | NSTAR LSP - Colburn St Substation | Add 4th 115/14 kV transformer and (2) 115 kV breakers at Colburn St. | In-service | In-service | 12/01/2004 | NR | \$1,000,000 | \$1,000,000 | | |
| Reliability Upgrade | 1a | 694 | NSTAR Electric Company | | 06/2008 | Short Term Lower SEMA Upgrades | Add new 115 kV line from Brook Street to Auburn Street. | In-Service | In-Service | 08/17/2007 | No | \$1,000,000 | \$1,000,000 | | |
| Reliability Upgrade | 1a | 833 | NSTAR Electric Company | | 06/2008 | Short Term Lower SEMA Upgrades | Add (5) new 115 kV circuit breakers at Brook Street. | In-Service | In-Service | 08/17/2007 | No | \$7,900,000 | \$7,900,000 | | |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---------------------|-------|------------|--------------------------------|--------------------------|---------------------------------|---|--|---------------|---------------|----------------------|--------------|---|---|-------------------------------|--------------|
| Reliability Upgrade | 1a | 960 | NSTAR Electric Company | | 06/2008 | Short Term Lower SEMA Upgrades | Install a new 115kV line termination at Auburn St south bus. | In-Service | In-Service | 08/17/2007 | No | \$3,060,000 | \$3,060,000 | | |
| Reliability Upgrade | 1a | 832 | NSTAR Electric Company | | 07/2009 | Short Term Lower SEMA Upgrades | Add(1) 115kV SVC (0-112 MVARs lagging) at Barnstable. | In-service | In-service | 08/17/2007 | No | \$82 M (Total NSTAR Project Cost Including Brook St. Station upgrade) | \$82 M (Total NSTAR Project Cost Including Brook St. Station upgrade) | \$82,000,000 | -\$4,600,000 |
| Reliability Upgrade | 1a | 695 | NSTAR Electric Company | | 07/2009 | Short Term Lower SEMA Upgrades | Loop (355) 345 kV line in and out of Carver Substation and add (5) new 345 kV circuit breakers at Carver substation. | In-service | In-service | 08/17/2007 | No | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA | -\$4,600,000 |
| Reliability Upgrade | 1a | 830 | NSTAR Electric Company | | 07/2009 | Short Term Lower SEMA Upgrades | Add a second 345/115 kV Auto transformer at Carver substation and add (1) new 345 kV circuit breaker and (3) new 115 kV circuit breakers at Carver substation. | In-service | In-service | 08/17/2007 | No | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA | |
| Reliability Upgrade | 1a | 831 | NSTAR Electric Company | | 07/2009 | Short Term Lower SEMA Upgrades | Add a second 115 kV line from Carver to Tremont and add (2) new 115 kV circuit breakers at Carver substation and (1) new 115 kV circuit breaker at Tremont substation. | In-service | In-service | 08/17/2007 | No | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA | |
| Reliability Upgrade | 1a | 713 | NSTAR Electric Company | | 09/2007 | | Add 115 kV 20 MVAR capacitor bank at Harwich/Harwich Tap. | In-service | In-service | 06/01/2007 | NR | \$900,000 | \$900,000 | | |
| Reliability Upgrade | 1a | 838 | NSTAR Electric Company | | 10/2007 | | Upgrade Canal 345 kV breaker #512 to IPT. | In-service | In-service | NR | NR | \$450,000 | \$450,000 | | |
| Reliability Upgrade | 1a | 500 | NSTAR Electric Company | | 11/2007 | | Install new 115 kV circuit breaker at Sandwich. | In-service | In-service | 2/5/2008 | NR | \$250,000 | \$250,000 | | |
| Reliability Upgrade | 1a | 834 | NSTAR Electric Company | | 06/2008 | | Upgrade Canal 345 kV breaker #112 to IPT. | In-Service | In-Service | NR | NR | \$450,000 | \$450,000 | | |
| Reliability Upgrade | 1a | 1064 | NSTAR Electric Company | | 04/2009 | | Install (1) 345kV 160 MVAR shunt reactor at Mystic Station | In-service | In-service | 9/26/2008 | No | \$10,400,000 | \$10,400,000 | \$10,400,000 | \$0 |
| Reliability Upgrade | 1a | 302 | NSTAR Electric Company | | 05/2009 | Boston Area 115 kV Enhancements | DCT separation of Framingham to Speen St. 433-507 circuit. | In-service | In-service | 01/18/2005 | 03/01/2005 | \$3,100,000 | \$3,100,000 | \$3,100,000 | \$0 |
| Reliability Upgrade | 1a | 238 | United Illuminating Company | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Build new Singer 345 kV substation with (12) circuit breakers, (2) autos, (4) shunt reactors along with reconnecting Bridgeport Energy thru one of the new autos. Includes 115 kV connection from Singer to Pequonnock substation. | In-Service | In-Service | 01/14/2006 | No | \$162,264,000 | \$162,264,000 | | |
| Reliability Upgrade | 1a | 224 | United Illuminating Company | Northeast Utilities | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install new 345 kV line from East Devon to Singer(UI). | In-Service | In-Service | 01/14/2006 | No | \$157,476,000 | \$157,476,000 | | |
| Reliability Upgrade | 1a | 313 | United Illuminating Company | Northeast Utilities | 06/2008 | UI LSP - Trumbull Substation | New Trumbull 115/13.8 kV Substation and 115 kV switching station. | In-Service | In-Service | 3/13/2008 | No | \$8,930,000 | \$8,930,000 | | |
| Reliability Upgrade | 1a | 845 | United Illuminating Company | | 05/2008 | | Replace Quinpiac 115 kV Oil Circuit Breaker. | In-Service | In-Service | NR | NR | \$650,000 | \$650,000 | | |
| Reliability Upgrade | 1a | 846 | United Illuminating Company | | 11/2008 | | Replace Mix Avenue 115 kV Oil Circuit Breaker & foundation. | In-Service | In-Service | NR | NR | \$450,000 | \$450,000 | | \$0 |
| Reliability Upgrade | 1a | 410 | Vermont Electric Power Company | | 12/2004 | Northwest Vermont Reliability Project | Sandbar PAR | In-Service | In-Service | 01/10/2003 | 03/31/2003 | \$6,200,000 | \$6,200,000 | | \$0 |
| Reliability Upgrade | 1a | 132 | Vermont Electric Power Company | | 12/2005 | Northwest Vermont Reliability Project | motorized SCADA controlled disconnect switch with a circuit breaker at Hartford substation on the line toward Wilder sub | In-Service | In-Service | 01/10/2003 | 03/31/2003 | \$3,200,000 | \$3,200,000 | | \$0 |
| Reliability Upgrade | 1a | 133 | Vermont Electric Power Company | | 12/2005 | Northwest Vermont Reliability Project | Essex K24 Line Breaker | In-Service | In-Service | 01/10/2003 | 03/31/2003 | \$1,000,000 | \$1,000,000 | | \$0 |
| Reliability Upgrade | 1a | 135 | Vermont Electric Power Company | | 12/2006 | Northwest Vermont Reliability Project | Blissville PAR | In-Service | In-Service | 01/10/2003 | 12/18/2006 | \$10,100,000 | \$10,100,000 | | \$0 |
| Reliability Upgrade | 1a | 137 | Vermont Electric Power Company | | 01/2007 | Northwest Vermont Reliability Project | New Haven-West Rutland 345kV line, 345/115 New Haven Sub with 115kV ring bus, and close the 345 kV ring bus at West Rutland | In-Service | In-Service | 01/10/2003 | 12/18/2006 | \$83,300,000 | \$83,300,000 | | \$0 |
| Reliability Upgrade | 1a | 134 | Vermont Electric Power Company | | 11/2007 | Northwest Vermont Reliability Project | Convert Williston into a ring bus configuration. | In-service | In-service | 01/10/2003 | 03/31/2003 | \$5,400,000 | \$5,400,000 | | \$0 |
| Reliability Upgrade | 1a | 138 | Vermont Electric Power Company | | 12/2008 | Northwest Vermont Reliability Project | N. Haven - Vergennes - Q. City 115 kV line. | In-Service | In-Service | 01/10/2003 | 12/18/2006 | \$70,200,000 | \$70,200,000 | | \$0 |
| Reliability Upgrade | 1a | 136 | Vermont Electric Power Company | | 04/2009 | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 1: two 115 kV PARs, four 25 MVAR Cap. banks, four +25/-12.5 MVAR synchronous condensers, and two 230/115 transformers. | In-Service | In-Service | 01/10/2003 | 03/31/2003 | \$62,400,000 | \$62,400,000 | | \$0 |
| Reliability Upgrade | 1a | 182 | Vermont Electric Power Company | | 09/2009 | Monadnock Area Reliability Project | Upgrade bus cable at N. Rutland and K35 115 kV breaker at Rutland. | In-service | In-service | 03/24/2006 | NR | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$0 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|--------------------------------|--------------------------|---------------------------------|---|---|---------------|---------------|----------------------|--------------|------------------------------|------------------------------|------------------------------|---------------|
| Generator Interconnection Upgrade | 2a | 847 | Bangor Hydro-Electric Company | | 12/2008 | Stetson Wind | Interconnect 60 MW of wind via 115 kV generator lead into Keene Road Substation. | In-Service | In-Service | 07/01/2007 | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2a | 621 | Northeast Utilities | | 10/2007 | AL Pierce | Interconnection to Wallingford (CMEEC) substation. | In-service | In-service | 3/8/2007 | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2a | 727 | Northeast Utilities | | 12/2007 | CL&P P&WA Aircraft Substation | CL&P P&WA Aircraft Substation. | In-service | In-service | 01/01/2007 | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2a | 728 | Northeast Utilities | | 06/2008 | Cos Cob Redevelopment | Installation of a second high-speed protection system on the 1440 115 kV line. | In-Service | In-Service | 06/01/2007 | NR | NR | NR | | |
| CANCELLED PROJECTS | | | | | | | | | | | | | | | |
| Elective | 4b | 984 | Central Maine Power Company | Maine Public Service | TBD | MEPCO-MPS 345 kV Interconnection | MEPCO-MPS 345 kV Interconnection. | Concept | Cancelled | No | No | TBD | TBD | TBD | |
| Reliability Upgrade | 1b | 275 | Northeast Utilities | | TBD | | Merrimack 115-kV substation - Protection Separation Upgrade. | Concept | Cancelled | No | No | TBD | TBD | TBD | |
| Generator Interconnection Upgrade | 2a | 327 | Central Maine Power Company | | 12/2010 | Queue Position 138 | Separate Section 215 from Section 63 and terminate Section 215 at newly established breaker position in Wyman Hydro S/S, which includes re-rating of Section 215. Expand Bigelow S/S and add capacitor banks at Lakewood, Guilford, and Sturtevant S/S's. | Cancelled | Cancelled | 12/3/2003 | NR | NR | NR | \$0 | |
| Reliability Upgrade | 1b | 912 | Central Maine Power Company | | 12/2009 | CMP LSP - Anson Substation | Add 115 kV circuit breakers and transformer at Anson Section 63. | Cancelled | Cancelled | No | No | NR | NR | NR | |
| Reliability Upgrade | 1b | 106 | Northeast Utilities | | TBD | | Upgrade the Southwest Hartford Substation to Bulk Power System standards (BPS). | Cancelled | Cancelled | 08/04/2004 | No | NR | NR | NR | |
| Reliability Upgrade | 1b | 1069 | NSTAR Electric Company | | 07/2011 | NPCC BPS Compliance | Bourne Station | Cancelled | Cancelled | No | No | NR | NR | NR | |
| Reliability Upgrade | 1a | 187 | Vermont Electric Power Company | | 12/2010 | Monadnock Area Reliability Project | Coolidge +/- 75 MVAR STATCOM with 50 MVARs of new capacitors at Coolidge and functional dynamic equivalent. | Cancelled | Cancelled | 03/24/2006 | No | NR | NR | NR | -\$50,000,000 |
| Reliability Upgrade | 1b | 920 | National Grid, USA | | 06/2010 | Auburn Area Transmission System Upgrades | Belmont substation - Upgrade Bus work. | Cancelled | Cancelled | 1/28/2008 | No | NR | NR | NR | -\$470,000 |
| Reliability Upgrade | 1b | 1117 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Install 115kV 50 MVAR capacitor bank at Falmouth | Cancelled | Cancelled | No | No | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA | |
| Reliability Upgrade | 1b | 337 | NSTAR Electric Company | | 12/2010 | Long Term Lower SEMA Upgrades | Canal to Oak Street #399 345 kV line. | Cancelled | Cancelled | No | No | NR | NR | NR | |
| Reliability Upgrade | 1b | 338 | NSTAR Electric Company | | 12/2010 | Long Term Lower SEMA Upgrades | Move Canal 345/115 Auto-transformer to Oak Street. | Cancelled | Cancelled | No | No | NR | NR | NR | |
| Reliability Upgrade | 1b | 967 | NSTAR Electric Company | | 12/2010 | Boston Area 115 kV Enhancements | Reconductor N. Woburn Tap to Reading Tap (Line 211-503 & 211-504). | Cancelled | Cancelled | No | No | NR | NR | NR | -\$2,000,000 |
| Reliability Upgrade | 1b | 808 | Northeast Utilities | | TBD | | Upgrade Scitico substation. | Cancelled | Cancelled | No | No | NR | NR | NR | -\$9,000,000 |
| Generator Interconnection Upgrade | 2b | 861 | Northeast Utilities | | 01/2010 | Queue Position 190 | Mount Tom - W Mass. Mt. Tom 115 kV Substation. | Cancelled | Cancelled | No | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2b | 869 | Northeast Utilities | | 06/2013 | Queue Position 226 | Rebuild 345 kV 326 Line | Cancelled | Cancelled | No | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2b | 1041 | Northeast Utilities | | 06/2013 | Queue Position 226 | Rebuild 115 kV U181 Line | Cancelled | Cancelled | No | NR | NR | NR | NR | |
| Reliability Upgrade | 1b | 258 | Northeast Utilities | | 2010-2011 | Springfield 115 kV Reinforcements | Retire low capacity Breckwood to East Springfield 115-kV cable. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 686 | Northeast Utilities | | 2010-2011 | Springfield 115 kV Reinforcements | Installation of a new 115-kV cable circuit between East Springfield and Clinton Substations. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 827 | Northeast Utilities | | 2010-2011 | Springfield 115 kV Reinforcements | Installation of two 115-kV cable circuits between East Springfield and Breckwood substations. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 496 | Northeast Utilities | | 2011-2013 | Springfield 115 kV Reinforcements | Additional uprating or rebuilding of the existing 115 kV overhead lines in the Springfield area. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 822 | Massachusetts Municipal Whol | Northeast Utilities | 2011-2013 | NEEWS (Greater Springfield Reliability Project) | Install two new 115-kV lines from Stony Brook (MMWEC) to line tap#1113 and tap #1134. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 999 | Northeast Utilities | | 2011-2013 | NEEWS (Greater Springfield Reliability Project) | Replace West Springfield to Breckwood 115 kV cable. | Cancelled | Cancelled | No | No | NR | NR | | |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|-----------------------------------|-------|------------|-----------------------------|--------------------------|---------------------------------|---|--|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|-------------|-------|
| Reliability Upgrade | 1b | 821 | Northeast Utilities | | 2011-2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild/Reconductor a portion of the Fairmont 1134 and 1113 115-kV lines up to where it taps the new Stony Brook lines. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 813 | Northeast Utilities | | 2011-2013 | NEEWS (Central Connecticut Reliability Project) | Add 345-kV shunt reactors at Frost Bridge, and North Bloomfield substations. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 815 | Northeast Utilities | | 2011-2013 | NEEWS (Central Connecticut Reliability Project) | Reconductor the East Hartford to the Riverside tap 1786 115-kV line. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 803 | Northeast Utilities | | 2011-2013 | NEEWS (Interstate Reliability Project) | Reconfigure the Millstone to Manchester 310 line into Card 345-kV substation. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 805 | Northeast Utilities | | 2011-2013 | NEEWS (Interstate Reliability Project) | Install new Northwest Hartford to Southwest Hartford 115kV cable. | Cancelled | Cancelled | No | No | NR | NR | | |
| Reliability Upgrade | 1b | 806 | Northeast Utilities | | 2011-2013 | NEEWS (Interstate Reliability Project) | Install new Southwest Hartford to South Meadow 115 kV Cable. | Cancelled | Cancelled | No | No | NR | NR | | |
| Generator Interconnection Upgrade | 2a | 1126 | Northeast Utilities | | TBD | Queue Position 161-4 | Two units and repowering of #6 Montville 345kV Substation | Cancelled | Cancelled | 6/9/2008 | NR | NR | NR | NR | |
| Reliability Upgrade | 1b | 316 | United Illuminating Company | | 06/2012 | | New Fairfield 115/13.8 kV substation | Cancelled | Cancelled | No | No | \$7,450,000 | \$7,450,000 | \$7,450,000 | \$0 |
| Reliability Upgrade | 1b | 977 | United Illuminating Company | | 06/2013 | | New Orange 115/13.8 kV substation | Cancelled | Cancelled | No | No | \$7,550,000 | \$7,550,000 | \$7,550,000 | \$0 |
| Reliability Upgrade | 1b | 980 | United Illuminating Company | | 06/2014 | | New Hamden 115/13.8 kV substation. | Cancelled | Cancelled | No | No | \$7,750,000 | \$7,750,000 | \$7,750,000 | \$0 |
| Reliability Upgrade | 1b | 317 | United Illuminating Company | | 06/2014 | | New North Branford 115/13.8-kV substation. | Cancelled | Cancelled | No | No | \$7,750,000 | \$7,750,000 | \$7,750,000 | \$0 |
| Reliability Upgrade | 1a | 608 | United Illuminating Company | | 12/2012 | | Upgrade Water Street, Broadway, Mill River, West River, Baird, Bridgeport RESCO, and Devon Tie substations to BPS standards. | Cancelled | Cancelled | 1/20/2006 | No | NR | NR | | |
| Reliability Upgrade | 1b | 249 | Northeast Utilities | | TBD | | Install new 115 kV line from Norwalk Harbor Station to Glenbrook Substation (accommodate 345 kV class cable). | Cancelled | Cancelled | No | No | NR | NR | | |

Generators w/ NO Feasibility Study completed - hide from Project List for now!

| | | | | | | | | | | | | | | | |
|-----------------------------------|----|------|--------------------------------|--------------------------------|---------|--------------------|--|--|--|----|----|----|----|----|--|
| Generator Interconnection Upgrade | 2b | 737 | Northeast Utilities | | 06/2010 | Queue Position 161 | Montville Substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 1017 | Northeast Utilities | | 09/2009 | Queue Position 222 | Haddam Neck-Southington 345-kV line. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 882 | United Illuminating Company | Northeast Utilities | 12/2009 | Queue Position 193 | Ansonia - UI Ansonia 115 kV substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 982 | Northeast Utilities | | 05/2010 | Queue Position 181 | Lake Road #4 - tap the 345 kV line. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 1037 | Vermont Electric Power Company | Central Vermont Public Service | 12/2010 | Queue Position 134 | Installation of 3-breaker 115kV ring bus interconnection on the Bennington-Searsburg 69kV Y25N Line. | | | No | NR | NR | NR | NR | |
| Generator Interconnection Upgrade | 2b | 619 | Northeast Utilities | | 07/2010 | Queue Position 125 | Interconnection to CL&P's Norwalk Harbor substation. | | | No | NR | NR | NR | | |

Generators w/ NO interconnection upgrades required! (RESERVE IN SPITS and REMOVE FROM PROJECT LISTING)

| | | | | | | | | | | | | | | | |
|-----------------------------------|----|-----|---------------------|--|---------|--------------------|---|--|--|----------|----|----|----|--|--|
| Generator Interconnection Upgrade | 2b | 730 | Northeast Utilities | | 05/2008 | Queue Position 160 | CL&P Middletown Substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 849 | Northeast Utilities | | 12/2008 | Queue Position 186 | Shepaug - 115 kV substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 857 | Northeast Utilities | | 06/2010 | Queue Position 186 | Shepaug - 115 kV substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 736 | Northeast Utilities | | 01/2009 | Queue Position 161 | CL&P Middletown Substation or CL&P Scovill Rock Substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 850 | Northeast Utilities | | 06/2009 | Queue Position 175 | CL&P Stony Hill 115 kV Substation or 345 kV line # 321. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 852 | Northeast Utilities | | 07/2009 | Queue Position 191 | Watertown - 115 kV line #1238 or #1191. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 853 | Northeast Utilities | | 07/2009 | Queue Position 199 | CL&P Baldwin 115kV substation. | | | 6/9/2008 | NR | NR | NR | | |

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|--|-------|------------------------|-----------------------------|-----------------------------|---------------------------------|---|--|---------------|---------------|----------------------|--------------|---|---|--------------|--------------|
| Generator Interconnection Upgrade | 2b | 620 | Northeast Utilities | | 12/2009 | Queue Position 145 | Interconnection to CL&P's 115-kV 1607 line. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 854 | Northeast Utilities | | 01/2010 | Queue Position 190 | Falls Village - 69 kV Substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 855 | Northeast Utilities | | 01/2010 | Queue Position 190 | Stevenson - CL&P Stevenson 115 kV Substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 856 | Northeast Utilities | | 01/2010 | Queue Position 190 | Tunnel- CL&P Tunnel 115 kV Substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 851 | Northeast Utilities | | 06/2010 | Queue Position 182 | CL&P Stony Hill 115 kV Substation #175. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 858 | Northeast Utilities | | 06/2010 | Queue Position 192 | CPV Danbury - CL&P Plumtree Substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2b | 883 | United Illuminating Company | | 2009 | Queue Position 159 | Bridgeport Energy II - UI 345 kV Singer Substation. | | | No | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2a | 848 | Northeast Utilities | | 11/2008 | Queue Position 183 | Millstone 3 - 345 kV Substation. | | | 08/15/2007 | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2a | 733 | Northeast Utilities | | 12/2008 | Plainfield Renewable Energy Project | CL&P Fry Brook Substation. | | | 06/01/2007 | NR | NR | NR | | |
| Generator Interconnection Upgrade | 2a | 735 | Northeast Utilities | | 01/2009 | Middletown 11 | NU Middletown Substation. | | | 12/01/2007 | NR | NR | NR | | |
| Interconnection | 2a | 734 | Northeast Utilities | | 03/2009 | Devon Units | Devon Substation. | | | 12/01/2007 | NR | NR | NR | | |
| REMOVE FROM SPITS and PROJECT LISTING | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 817 (merged w/ ID 816) | Northeast Utilities | | 2011-2013 | NEEWS (Greater Springfield Reliability Project) | Reconfigure/Modify North Bloomfield, Northwest Hartford, Southwest Hartford and South Meadow 115-kV substations. | | | No | No | TBD | TBD | | |
| Reliability Upgrade | 1a | 1081 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Greater Springfield Reliability Project) | BPS requirements for Springfield stations | | | 9/24/2008 | No | \$18,500,000 | \$18,500,000 | \$18,500,000 | \$18,500,000 |
| Reliability Upgrade | 1a | 1082 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Greater Springfield Reliability Project) | BPS Requirements for Connecticut stations | | | 9/24/2008 | No | \$6,200,000 | \$6,200,000 | \$6,200,000 | \$6,200,000 |
| Reliability Upgrade | 1a | 1083 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Central Connecticut Reliability Project) | BPS Requirements | | | 9/24/2008 | No | \$6,200,000 | \$6,200,000 | \$6,200,000 | \$6,200,000 |
| Reliability Upgrade | 1a | 1093 | Northeast Utilities | | 2011-2013 | NEEWS (Ancillary Project) | NU's BPS Requirements for NEEWS | | | No | No | \$39,000,000 | \$39,000,000 | | |
| KEEP IN SPITS and DON'T SHOW I/S for JUL-08 PROJECT LISTING | | | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 611 | Northeast Utilities | | 11/1/2006 | Southwest Connecticut Reliability Project PH II (M-N) | Remove a portion of the 115 kV 1690 line from Devon to Cook Hill Jct. | | | 01/14/2006 | No | Part of SWCT (Middletown-Norwalk) Reliability Project | Part of SWCT (Middletown-Norwalk) Reliability Project | | |
| Reliability Upgrade | 1a | 230 | Northeast Utilities | | 12/22/2006 | Southwest Connecticut Reliability Project PH II (M-N) | Expand Scovill Rock 345 kV substation. | | | 04/01/2007 | No | Part of SWCT (Middletown-Norwalk) Reliability Project | Part of SWCT (Middletown-Norwalk) Reliability Project | | |
| Reliability Upgrade | 1a | 231 | Northeast Utilities | United Illuminating Company | 10/22/2007 | Southwest Connecticut Reliability Project PH II (M-N) | Rebuild 115 kV Devon to Devon Switching Station(UI) 1780 and 1790 lines. | | | 01/14/2006 | No | Part of SWCT (Middletown-Norwalk) Reliability Project | Part of SWCT (Middletown-Norwalk) Reliability Project | | |
| Reliability Upgrade | 6a | 780 | National Grid, USA | | 8/2008 | Merrimack Valley/North Shore Reliability Project | Revise Melrose supply configuration. | | | 4/1/2008 | No | \$5,100,000 | \$5,100,000 | | -\$4,100,000 |
| Reliability Upgrade | 6a | 1052 | National Grid, USA | | 11/2010 | Merrimack Valley/North Shore Reliability Project | Reconductor I-161 115 kV line from Meadowbrook to North Chelmsford. | | | 6/27/2008 | No | Part of Merrimack Valley/North Shore Project | Part of Merrimack Valley/North Shore Project | | |
| Reliability Upgrade | 6a | 1053 | National Grid, USA | | 11/2010 | Merrimack Valley/North Shore Reliability Project | Reconductor A-153 115 kV line from Meadowbrook to North Chelmsford. | | | 6/27/2008 | No | Part of Merrimack Valley/North Shore Project | Part of Merrimack Valley/North Shore Project | | |

Notes

- ¹ Project pending solution documentation for the Greater Rhode Island Transmission Reinforcements.
- ² The Northeast Utilities' estimated costs for the NEEWS BPS upgrades are shared among the Greater Springfield, Central Connecticut, and Interstate portions of the NEEWS Project.
- ³ The total TCA (NU-07-TCA-24) PTF cost is \$234.2 million for the Norwalk - Glenbrook Project. The forecasted PTF cost is \$249.4 million.
- ⁴ The total TCA (NU-08-TCA-01) PTF cost is \$1.05 billion for Northeast Utilities portion of the Middletown-Norwalk Project. The forecasted PTF cost is \$978.2 million.
- ⁵ The project was completed in December 2009, and was energized and placed in service under the jurisdiction of CONVEX but has since been isolated and de-energized due to a significant incident at the power plant

April '10 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver Local Project Listing Link | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-09 Status | Apr-10 Status | PPA (I.3.9) Approval | TCA Approval | Oct-09 Estimated PTF Costs | Apr-10 Estimated PTF Costs | Column T | DELTA |
|---|-------|------------|-------------------------------|--------------------------------|---------------------------------------|---------------|---------|---------------|---------------|-------------------------|-----------------|-------------------------------|-------------------------------|----------|-------|
| NSTAR: | | | | | | | | | | | | | | | |
| http://www.nstar.com/business/rates_tariffs/open_access/ | | | | | | | | | | | | | | | |
| CMP: | | | | | | | | | | | | | | | |
| http://www.cmpco.com/SuppliersAndPartners/TransmissionServices/CMPTransmissionSvc/lsp.html | | | | | | | | | | | | | | | |
| BHE: | | | | | | | | | | | | | | | |
| http://www.bhe.com/data/OASIS/LSP.html | | | | | | | | | | | | | | | |
| VELCO: | | | | | | | | | | | | | | | |
| http://www.vermontspc.com/default.aspx | | | | | | | | | | | | | | | |
| NU: | | | | | | | | | | | | | | | |
| http://www.transmission-nu.com/business/ferc890postings.asp | | | | | | | | | | | | | | | |
| NGRID: | | | | | | | | | | | | | | | |
| http://www.nationalgridus.com/oasis/filings_studies.asp | | | | | | | | | | | | | | | |
| UI: | | | | | | | | | | | | | | | |
| http://www.uinet.com/uinet/resources/file/ebcfda4ccb73dd/UI%20Local%20System%20Plan.pdf | | | | | | | | | | | | | | | |

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (1.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-------------------------------|--------------------------|---------------------------------|---|--|--------------------|--------------------|----------------------|--------------|---|---|
| TABLE A | | | | | | | | | | | | | |
| MAINE | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 144 | Bangor Hydro-Electric Company | | 12/2010 | Keene Rd Autotransformer | Installation of a 345/115 kV autotransformer at Keene Rd Substation. | Under Construction | Under Construction | No | No | \$29,000,000 | \$29,000,000 |
| Reliability Upgrade | 1a | 625 | Central Maine Power Company | | 02/2010 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Rumford Industrial Park capacitor bank. | Planned | Under Construction | 11/30/2007 | No | \$5,400,000 | \$5,400,000 |
| Reliability Upgrade | 1a | 1128 | Central Maine Power Company | | 07/2010 | CMP-LSP Hotel Road Substation | Add 115/34kV transformer with 115kV breaker at Hotel Rd. | Planned | Planned | 8/20/2008 | NR | \$800,000 | \$800,000 |
| Reliability Upgrade | 1a | 624 | Central Maine Power Company | | 2010 | Rumford-Woodstock-Kimball Road Corridor Project | Install 115 kV line (New Page - Rumford Industrial Park) | Planned | Planned | 11/30/2007 | No | Part of project 625 | Part of project 625 |
| Reliability Upgrade | 1a | 905 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Orrington-Albion Rd-Coopers Mills, Coopers Mills-Larrabee Road, Larrabee Road-Surowiec). | Planned | Planned | 7/31/2008 | No | \$1,510,000,000 | \$1,510,000,000 |
| Reliability Upgrade | 1a | 906 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 115kV line construction (Orrington-Coopers Mills, Coopers Mills-Highland, Larrabee Road-Lewiston Lower, Larrabee Road-Livermore Falls, Livermore Falls-Rumford IP) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 907 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Rebuild Existing 115kV lines: Sections 86 (Bucksport-Belfast), Section 84 (Albion Road-Coopers Mills), Section 203 (Detroit-Orrington), Section 80 (Coopers Mills-Highland), Sections 60 & 212 (Coopers Mills-Bowman St-Larrabee Road), Sections 89 & 229 (Livermore Falls-Riley-Rumford IP) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 908 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Albion Road, Larrabee Road) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 909 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Add 2-115kV breakers & rebuild 86A, new .25 mile transmission at Belfast | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1025 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Separation of Double Circuit Towers (345kV Kennebec River Crossing 375/377 & Maine Yankee 375/392, 115kV Bucksport 65/205) and Maine Yankee 345 kV re-termination | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1026 | Central Maine Power Company | Northeast Utilities | 12/2012 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Surowiec-Raven Farm, South Gorham-Maguire Road, Maguire Road-Three Rivers) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Portion of CMP \$1.51B and portion of NU is \$35.1M | Portion of CMP \$1.51B and portion of NU is \$35.1M |
| Reliability Upgrade | 1a | 1027 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 115kV Line Construction (Elm Street-East Deering, East Deering -Cape) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1028 | Central Maine Power Company | Northeast Utilities | 12/2012 | Maine Power Reliability Program (MPRP) | Rebuild existing 115kV Line (Section 250, Maguire Rd-Three Rivers) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Portion of CMP \$1.51B and portion of NU is TBD | Portion of CMP \$1.51B and portion of NU is TBD |
| Reliability Upgrade | 1a | 1029 | Central Maine Power Company | | 11/2010 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformer at South Gorham | Under Construction | Under Construction | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1030 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Raven Farm, Maguire Road) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 143 | Bangor Hydro-Electric Company | | 12/2012 | Down East Reliability Improvement | Contract 115 kV from Trenton tap (part of Hancock Reliability Project) to new Tunk Lake Substation to Harrington Substation. | Planned | Planned | 5/10/2006 | 6/13/2008 | \$66,100,000 | \$66,100,000 |
| Reliability Upgrade | 1a | 1129 | Central Maine Power Company | | 05/2012 | | New 115kV line between Wyman Hydro and Heywood Rd. parallel to exiting Section 83. Install a 115kV circuit breaker at Wyman Hydro termination | Planned | Planned | 1/26/2009 | No | \$19,500,000 | \$19,500,000 |
| Reliability Upgrade | 1a | 1144 | Central Maine Power Company | | 04/2010 | Heywood Road Project | Circuit switcher replacements at Detroit, Lakewood, Rice Rips and Winslow | Under Construction | Under Construction | 3/20/2009 | 7/20/2009 | Part of Heywood Road Project | Part of Heywood Road Project |
| Generator Interconnection Upgrade | 2a | 770 | Central Maine Power Company | | 12/2010 | Queue Position 137 | Installation of New Page Substation (aka Railroad Street Substation) with (3) circuit breakers tapping Section 218 115kV. | Proposed | Proposed | 3/18/2007 | NR | NR | NR |
| NEW HAMPSHIRE | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 277 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Add 2nd 345/115 kV autotransformer and 3-345kV breakers at Deerfield substation. | Planned | Planned | 6/29/2009 | No | \$56,600,000 | \$56,600,000 |
| Reliability Upgrade | 1a | 1137 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Replace 5-115kV breakers and add 1-115kV breaker at Deerfield Substation | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

| October '09 ISO-NEW ENGLAND Project Listing Update | | | | | | | | | | | | | |
|--|-------|------------|--------------------------------|--------------------------|---------------------------------|--|---|--------------------|--------------------|----------------------|--------------|---|---|
| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
| Reliability Upgrade | 1a | 1138 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Rebuild 115kV L175 line | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1139 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV M183 Line | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1140 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV C129 Line | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1141 | Northeast Utilities | | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Rochester Substation Upgrades | Planned | Planned | 6/29/2009 | No | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 680 | National Grid, USA | | 09/2012 | | Rebuild Bellows Falls Substation and install 115 kV capacitor bank. | Planned | Planned | 1/28/2008 | No | \$11,497,000 | \$7,393,000 |
| Reliability Upgrade | 1a | 674 | National Grid, USA | | 09/2013 | | Replace Comerford 230 kV breakers and add (1) 230 kV bus tie breaker. | Planned | Planned | 4/1/2008 | No | \$12,000,000 | \$7,720,000 |
| Elective | 4a | 1142 | FPL New England Division | | 10/2009 | | Seabrook Station Reconfiguration and Circuit Breaker addition Stage s 1 & 2 | Planned | Planned | 11/20/2008 | NR | TBD | TBD |
| Generator Interconnection Upgrade | 2a | 724 | National Grid, USA | | 11/2009 | NGRID Comerford Substation | NGRID Comerford Substation. | Planned | Planned | 6/12/2007 | NR | NR | NR |
| VERMONT | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 320 | Vermont Electric Power Company | | 10/2009 | Lamoille County Project | Middlesex Substation 115 kV breaker addition. | Under Construction | Under Construction | 08/16/2007 | 02/07/2008 | \$4,857,000 | \$4,857,000 |
| Reliability Upgrade | 1a | 322 | Vermont Electric Power Company | | 10/2009 | Lamoille County Project | Installation of new Duxbury Substation that involves looping in and out of the Middlesex - Essex 115 kV (K24) line. | Under Construction | Under Construction | 08/16/2007 | 02/07/2008 | Part of Lamoille County Project | Part of Lamoille County Project |
| Reliability Upgrade | 1a | 139 | Vermont Electric Power Company | | 12/2010 | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 2: synchronous condensers expanded to +200/- 100 MVAR and two 25 MVAR capacitor banks. | Planned | Planned | 01/10/2003 | 03/31/2003 | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 321 | Vermont Electric Power Company | | 12/2009 | Burlington Project | Burlington 115kV Loop - 5 mi of new line & rebuilding 5 miles of existing line between two existing substations with expansion of the East Avenue substation. | Under Construction | Under Construction | 10/24/2006 | 05/23/2007 | \$25,142,000 | \$25,142,000 |
| Reliability Upgrade | 1a | 1145 | Vermont Electric Power Company | | 09/2011 | Burlington Project | Installation of a 3-breaker 115kV ring substation and 115/34.5kV transformer on the East Ave. - Tafts Coners 115kV line | | Planned | 10/24/2006 | No | | \$14,000,000 |
| Reliability Upgrade | 1a | 1032 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project | Installation of a new 345/115kV substation called Vernon including a new 345/115kV autotransformer | Under Construction | Under Construction | 10/1/2008 | No | \$69,815,000 | \$69,815,000 |
| Reliability Upgrade | 1a | 1033 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project (VELCO LSP - Newfane Substation) | Installation of a new 345/115kV substation called Newfane | Under Construction | Under Construction | 10/1/2008 | No | \$16,664,000 | \$16,664,000 |
| Reliability Upgrade | 1a | 1034 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project | Loop new 345kV Line into Newfane Substation. | Under Construction | Under Construction | 10/1/2008 | No | Part of project 323 | Part of project 323 |
| Reliability Upgrade | 1a | 1035 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project | Expansion of Coolidge 345kV substation | Under Construction | Under Construction | 10/1/2008 | No | \$20,117,000 | \$20,117,000 |
| Reliability Upgrade | 1a | 1146 | Vermont Electric Power Company | | 12/2012 | Lyndonville Project | Installation of a 3-breaker 115kV righ station consisting of two 115kV 12.5 MVAR capacitor banks and 115/34.5 kV transformer interconnecting to the Irasburg - St. Johnsbury 115kV line | | Planned | 6/1/2009 | No | | \$9,000,000 |
| Generator Interconnection Upgrade | 2a | 1036 | Vermont Electric Power Company | | 12/2009 | Queue Position 172 | Installation of 3-breaker 115kV ring bus interconnection of the St. Johnsbury-Irasburg 115kV K39 line. | Planned | Planned | 08/16/2007 | NR | NR | NR |
| MASSACHUSETTS | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 1063 | NSTAR Electric Company | | 12/2009 | | Install (2) 115kV 40 MVAR shunt reactors at Edgar Station | Planned | Under Construction | 05/2009 | No | \$5,400,000 | \$5,400,000 |
| Reliability Upgrade | 1a | 1152 | National Grid, USA | | 8/2010 | | Bear Swamp - Pratts Junction 230kV Line Refurbishment Project (E205E) | | Planned | NR | NR | | \$43,596,000 |
| Reliability Upgrade | 1a | 887 | National Grid, USA | | 09/2012 | Auburn Area Transmission System Upgrades | Expand Auburn St Substation to include 2nd 345/115 kV autotransformer and 345 kV ring bus. | Planned | Planned | 1/28/2008 | No | \$30,000,000 | \$30,000,000 |

Notes
- Black shading indicates change from July '09 Update.
- All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|--|--|--------------------|--------------------|----------------------|--------------|----------------------------|----------------------------|
| Reliability Upgrade | 1a | 921 | National Grid, USA | | 01/2012 | Auburn Area Transmission System Upgrades | Bridgewater substation - Upgrade Bus work and convert to BPS substation. | Planned | Planned | 1/28/2008 | No | \$12,100,000 | \$12,100,000 |
| Reliability Upgrade | 1a | 919 | National Grid, USA | | 09/2012 | Auburn Area Transmission System Upgrades | Dupont substation - Upgrade Buswork and convert to BPS substation. | Planned | Planned | 1/28/2008 | No | \$4,600,000 | \$4,600,000 |
| Reliability Upgrade | 1a | 783 | National Grid, USA | | 03/2011 | Merrimack Valley/North Shore Reliability Project | Extend the 115kV by addition of 115kV Breaker and K-153 line from King St. to W. Amesbury 115kV station. (W. Amesbury 345/115kV Station becomes PTF) | Planned | Planned | 4/1/2008 | No | \$30,349,000 | \$30,349,000 |
| Reliability Upgrade | 1a | 777 | National Grid, USA | | 11/2009 | Merrimack Valley/North Shore Reliability Project | Build Wakefield Junction station with four 345/115 kV autotransformers. | Under Construction | Under Construction | 4/1/2008 | No | \$95,000,000 | \$95,000,000 |
| Reliability Upgrade | 1a | 161 | National Grid, USA | | 11/2009 | Merrimack Valley/North Shore Reliability Project | Loop 345 kV 339 line and 115 kV S-145/T-146 into new Wakefield Jct. Substation. | Under Construction | Under Construction | 4/1/2008 | No | \$4,986,431 | \$4,986,431 |
| Reliability Upgrade | 1a | 779 | National Grid, USA | | 04/2010 | Merrimack Valley/North Shore Reliability Project | Bypass and remove Golden Hills 345 kV substation. | Under Construction | Under Construction | 4/1/2008 | No | \$5,132,609 | \$5,132,609 |
| Reliability Upgrade | 1a | 840 | NSTAR Electric Company | | 10/2010 | Merrimack Valley/North Shore Reliability Project | Upgrade the 115 kV line (Line 423-515) from Mystic-Everett by adding a new parallel cable to the existing 115 kV cable. (NSTAR portion only) | Planned | Planned | 4/1/2008 | No | \$7,300,000 | \$7,300,000 |
| Reliability Upgrade | 1a | 775 | National Grid, USA | | 06/2012 | Merrimack Valley/North Shore Reliability Project | Addition of 4 breakers and relocation of T1 and T2 into new bays at Sandy Pond. | Planned | Planned | 6/27/2008 | No | \$20,100,000 | \$20,100,000 |
| Reliability Upgrade | 1a | 776 | National Grid, USA | | 06/2012 | Merrimack Valley/North Shore Reliability Project | Re-conductor O-167 (NGRID portion of Mystic - Everett) 115 kV line. | Planned | Planned | 6/27/2008 | No | \$2,865,876 | \$2,865,876 |
| Reliability Upgrade | 1a | 782 | National Grid, USA | | 10/2013 | Merrimack Valley/North Shore Reliability Project | Replace existing S145/T146 UG cables with higher capacity cables between Salem Harbor n Railyard. | Planned | Planned | 6/27/2008 | No | \$38,100,000 | \$38,100,000 |
| Reliability Upgrade | 1a | 961 | NSTAR Electric Company | | 11/2010 | Mystic Breaker Additions Project | Install (2) new 115 kV East Bus breakers #30 and #32 at Mystic and move Transformer 110B Connection. | Planned | Under Construction | 3/10/2008 | No | \$3,800,000 | \$3,800,000 |
| Reliability Upgrade | 1a | 903 | NSTAR Electric Company | | 12/2009 | Mystic IPT Breaker Project | Upgrade (4) 115 kV breakers #2, #4, #5, and #16 at Mystic to IPT and separate controls with Boston Gen units #5 and #6. | Planned | Under Construction | NR | NR | \$1,240,000 | \$1,240,000 |
| Reliability Upgrade | 1a | 904 | NSTAR Electric Company | | 12/2010 | Mystic IPT Breaker Project | Upgrade (5) 115 kV breakers #1, #7, #15 #19 and #20 at Mystic to IPT and separate controls with Boston Gen #4. | Planned | Planned | NR | NR | \$990,000 | \$990,000 |
| Reliability Upgrade | 1a | 59 | National Grid, USA | | 01/2012 | Auburn Reliability Transmission System Upgrades | G18, F19 line terminals 115kV upgrades at Bridgewater sub | Planned | Planned | 11/1/2007 | 1/31/2003 | \$400,000 | \$400,000 |
| Reliability Upgrade | 1a | 929 | National Grid, USA | | 06/2011 | Central/Western Massachusetts Upgrades | Searsburg - install in-line 69 kV breaker for operational flexibility. | Planned | Planned | 12/17/2007 | No | \$1,381,849 | \$1,381,849 |
| Reliability Upgrade | 1a | 931 | National Grid, USA | | 01/2013 | Central/Western Massachusetts Upgrades | Park St. - incremental cost of designing for 115 kV instead of 69 kV. | Planned | Planned | 12/17/2007 | No | \$531,481 | \$531,481 |
| Reliability Upgrade | 1a | 928 | National Grid, USA | | 12/2010 | Central/Western Massachusetts Upgrades | Millbury -upgrade terminal equipment for O-141, P-142, B-128, A-127 circuit breakers. | Planned | Planned | 12/17/2007 | No | \$1,945,218 | \$2,300,000 |
| Reliability Upgrade | 1a | 930 | National Grid, USA | | 12/2009 | Central/Western Massachusetts Upgrades | Reconductor Nashua St - Quinsigamond Jct (O141) 115 kV line w/636 ACSS. | Planned | Under Construction | 12/17/2007 | No | \$2,300,000 | \$2,300,000 |
| Reliability Upgrade | 1a | 934 | National Grid, USA | | 10/2010 | Central/Western Massachusetts Upgrades | Reconductor #2 Tap from Tower 510 - Webster St. 115 kV circuit. | Planned | Planned | 12/17/2007 | No | \$818,480 | \$818,480 |
| Reliability Upgrade | 1a | 935 | National Grid, USA | | 07/2010 | Central/Western Massachusetts Upgrades | Reconductor from (A-127E/B-128E) Millbury - Tower 510 115 kV line. | Planned | Planned | 12/17/2007 | No | \$5,208,509 | \$5,208,509 |
| Reliability Upgrade | 1a | 933 | National Grid, USA | | 12/2009 | Central/Western Massachusetts Upgrades | Reconductor Pratts Jct - Flagg Pond I-135S & J-136S 115 kV lines w/795 ACSS. | Planned | Under Construction | 12/17/2007 | No | \$6,137,112 | \$6,137,112 |
| Reliability Upgrade | 1a | 938 | National Grid, USA | | 06/2010 | Central/Western Massachusetts Upgrades | Deerfield - install a new 115/69kV autotransformer and a 69kV breaker and disconnect switches. | Planned | Planned | 12/17/2007 | No | \$3,068,556 | \$3,068,556 |
| Reliability Upgrade | 1a | 939 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Reconductor and retension (E205W) Harriman - Bear Swamp Tap 230 kV circuit. | Planned | Planned | 12/17/2007 | No | \$3,389,658 | \$3,389,658 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---|--|--------------------|--------------------|----------------------|--------------|----------------------------|----------------------------|
| Reliability Upgrade | 1a | 940 | National Grid, USA | | 04/2011 | Central/Western Massachusetts Upgrades | Reconductor sections of A127W line w/795 ACSS. | Planned | Planned | 12/17/2007 | No | \$6,235,744 | \$6,235,744 |
| Reliability Upgrade | 1a | 942 | National Grid, USA | | 10/2010 | Central/Western Massachusetts Upgrades | Webster St. - add two 115 kV circuit breakers. | Planned | Planned | 12/17/2007 | No | \$2,767,180 | \$2,767,180 |
| Reliability Upgrade | 1a | 927 | National Grid, USA | | 07/2010 | Central/Western Massachusetts Upgrades | Greendale - replace 115 kV breaker and upgrade to 2000A. | Planned | Planned | 12/17/2007 | No | \$584,629 | \$584,629 |
| Reliability Upgrade | 1a | 925 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - supply 13 kV from T3 and T4. | Planned | Planned | 12/17/2007 | No | \$318,888 | \$318,888 |
| Reliability Upgrade | 1a | 926 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - replace T8 autotransformer with 230 kV 333 mVA, upgrade breaker and bus to 115 kV. Install high side 230 kV breaker. | Planned | Planned | 12/17/2007 | No | \$6,027,520 | \$6,027,520 |
| Reliability Upgrade | 1a | 932 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - increase thermal rating of I-135 and J-136 buswork. | Planned | Planned | 12/17/2007 | No | \$372,036 | \$372,036 |
| Reliability Upgrade | 1a | 924 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Replace five 115 kV-25 kA breakers with 115 kV-50 kA breakers and upgrade disconnect switch (175-3) to 2000A. | Planned | Planned | 12/17/2007 | No | \$2,147,181 | \$2,147,181 |
| Reliability Upgrade | 1a | 941 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Install new Millbury - Tower #510 115 kV line. | Planned | Planned | 12/17/2007 | No | \$7,909,203 | \$7,909,203 |
| Reliability Upgrade | 1a | 943 | National Grid, USA | | 01/2011 | Central/Western Massachusetts Upgrades | Millbury - new 115 kV breaker position for new line to Twr 510. | Planned | Planned | 12/17/2007 | No | \$1,073,995 | \$1,073,995 |
| Reliability Upgrade | 1a | 944 | National Grid, USA | | 07/2012 | Central/Western Massachusetts Upgrades | Wachusett - install one 345 kV, 448 mVA transformer, one 345 kV breaker, and one 115 kV breaker. | Planned | Planned | 12/17/2007 | No | \$11,411,849 | \$11,411,849 |
| Reliability Upgrade | 1a | 950 | National Grid, USA | | 12/2013 | Central/Western Massachusetts Upgrades | E Winchendon - install 115 kV breaker and 115 kV disconnect switch. | Planned | Planned | 12/17/2007 | No | \$1,016,897 | \$1,016,897 |
| Reliability Upgrade | 1a | 953 | National Grid, USA | | 12/2013 | Central/Western Massachusetts Upgrades | Otter River - expand substation into 6-breaker ring bus with four 115 kV breakers and install two transformers. | Planned | Planned | 12/17/2007 | No | \$10,248,067 | \$10,248,067 |
| Reliability Upgrade | 1a | 954 | National Grid, USA | | 12/2013 | Central/Western Massachusetts Upgrades | E Westminster - install new 115 kV breaker, including disconnect switches. Assumes no new control house. | Planned | Planned | 12/17/2007 | No | \$903,909 | \$903,909 |
| Reliability Upgrade | 1a | 945 | National Grid, USA | | 02/2013 | Central/Western Massachusetts Upgrades | Adams - install third 115 kV breaker to complete ring bus. | Planned | Planned | 12/17/2007 | No | \$1,581,841 | \$1,581,841 |
| Reliability Upgrade | 1a | 946 | National Grid, USA | | 04/2013 | Central/Western Massachusetts Upgrades | Convert 69 kV (O-15S) Palmer - E Longmeadow - Shaker Rd line to 115 kV. | Planned | Planned | 12/17/2007 | No | \$9,604,032 | \$9,604,032 |
| Reliability Upgrade | 1a | 947 | National Grid, USA | | 04/2013 | Central/Western Massachusetts Upgrades | Reconductor 115 kV line from Palmer to new Hampden Substation. | Planned | Planned | 12/17/2007 | No | \$2,632,635 | \$2,632,635 |
| Reliability Upgrade | 1a | 948 | National Grid, USA | | 07/2012 | Central/Western Massachusetts Upgrades | Hampden - build new 115 kV substation at 1515/O-15S intersection (4 breaker ring). | Planned | Planned | 12/17/2007 | No | \$5,649,430 | \$5,649,430 |
| Reliability Upgrade | 1a | 949 | National Grid, USA | | 07/2012 | Central/Western Massachusetts Upgrades | Palmer - add 115 kV breaker position for O15S conversion, includes thermal upgrade of W-175 bay. | Planned | Planned | 12/17/2007 | No | \$1,694,829 | \$1,500,000 |
| Reliability Upgrade | 1a | 952 | National Grid, USA | | 06/2011 | Central/Western Massachusetts Upgrades | Reconductor E Winchendon - J136 Tap within I135/J136 ROW w/795 ACSR. | Planned | Planned | 12/17/2007 | No | \$932,156 | \$932,156 |
| Reliability Upgrade | 1a | 937 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Bear Swamp - install one 230-115 kV 333 mVA auto, one 115 kV breaker and upgrade various terminal equipment. | Planned | Planned | 12/17/2007 | No | \$6,602,875 | \$6,602,875 |
| Reliability Upgrade | 1a | 955 | National Grid, USA | | 11/2011 | Central/Western Massachusetts Upgrades | Reconductor (W175) W Charton - Little Rest - Palmer w/1590 ACSR. | Planned | Planned | 12/17/2007 | No | \$10,779,113 | \$10,779,113 |
| Reliability Upgrade | 1a | 162 | National Grid, USA | | 04/2011 | | Q-169 Golden Hills to Lynn 115 kV line upgrade. | Under Construction | Under Construction | 9/2/2005 | 4/25/2008 | \$12,390,000 | \$12,390,000 |
| Reliability Upgrade | 1a | 902 | National Grid, USA | | 03/2012 | Middleboro Municipal | Close the E1-M1 loop at Middleboro's Wareham St Sub. | Under Construction | Under Construction | 12/01/2006 | NR | \$715,000 | \$715,000 |
| Reliability Upgrade | 1a | 1000 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Separate and reconductor the 1311 and 1412 (West Springfield - Agawam) 115 kV double circuit. | Planned | Planned | 6/27/2008 | No | \$22,000,000 | \$22,000,000 |
| Reliability Upgrade | 1a | 951 | National Grid, USA | | 02/2013 | Central/Western Massachusetts Upgrades | Install new Otter River - E Winchendon 115 kV line. | Planned | Planned | 12/17/2007 | No | \$7,455,440 | \$7,455,440 |
| Reliability Upgrade | 1a | 687 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Fairmont 16H Substation Expansion | Planned | Planned | 9/24/2008 | No | \$714,000,000 | \$714,000,000 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---|---|---------------|---------------|----------------------|--------------|---|---|
| Reliability Upgrade | 1a | 826 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | South Agawam 42E Substation Reconfigure | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 196 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line (3216), Agawam (MA) - North Bloomfield (CT) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 818 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reconstruct a new 115kV line South Agawam to Southwick (1768) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 819 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line Ludlow - Agawam (3196) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 820 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Expansion of Agawam 16C 115 kV Substation to include new 345 kV station with two 345/115-kV autotransformers. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 823 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Ludlow 19S 345 kV Substation Expansion, two 345/115kV Autotransformers replacements. Add two 345kV 120 MVAR Capacitor additions | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 828 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Breckwood 115kV circuit 1322 Reactor Bypass and Open Breckwood Substation 1T breaker and maintain breaker in the normally open position | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 829 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Piper (1230) 115 kV line. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1010 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build 115-kV Cadwell switching 50F station. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 259 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to Orchard (1426) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 688 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Cadwell (1481) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1100 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Chicopee (1314) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1101 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Orchard (1552) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1102 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Piper (1601) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1103 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Chicopee (1602) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1104 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Cadwell (1603) 115kV line and add 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1105 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Shawinigan (1604) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1070 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1781) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1071 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1782) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1072 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Shawinigan (1845) 115kV line and add 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1073 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Retermine Cadwell to East Springfield (5001) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1074 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Retermine Cadwell to East Springfield (5002) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---|---|---------------|---------------|----------------------|--------------|---|---|
| Reliability Upgrade | 1a | 1075 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add 2nd high speed protection scheme to Agawam to Elm (1007) 115kV line if the Russell Biomass Plant, queue position #135 is constructed | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1076 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1311) 115kV line | Planned | Planned | 9/24/2008 | No | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 1077 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1412) 115kV line | Planned | Planned | 9/24/2008 | No | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 1078 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Pineshed (1327) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1079 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Mt. Tom (1428) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1080 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Replace 4T and 6T 115kV circuit breaker to Shawinigan substation | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 673 | National Grid, USA | | 12/2012 | Worcester Area Reinforcements | Add new 115kV bay to separate the M-165 & E-157 terminal at Millbury #2 Substation | Planned | Planned | 2/27/2009 | No | \$2,200,000 | \$2,200,000 |
| Reliability Upgrade | 1a | 676 | National Grid, USA | | 12/2012 | Worcester Area Reinforcements | New Bloomingdale to Vernon Hill 115 kV (UG Cable-3.6 mi.) new 115kV breaker at Bloomingdale & Vernon Hill | Planned | Planned | 2/27/2009 | No | \$30,000,000 | \$30,000,000 |
| Generator Interconnection Upgrade | 2a | 1045 | National Grid, USA | | 06/2010 | Lowell Power | Upgrade 137T and K-137W 115 kV circuit breakers at Sandy Pond. | Planned | Planned | 7/25/2006 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 505 | National Grid, USA | | 07/2010 | Hoosac Wind Farm | Tap Y-25S line between Harriman and Deerfield 5. Construct 69/34.5 kV substation and 34.5 kV line connecting 30 MW generating facility with the 69 kV system. | Planned | Planned | 02/01/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 595 | NSTAR Electric Company | | 11/2010 | Cape Wind | Expansion of Barnstable 115 kV substation to include 5th bay and (2) circuit breakers, addition of a 3rd breaker in the planned 4th bay, and (2) 35MVAR shunt reactors. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 596 | NSTAR Electric Company | | 11/2010 | Cape Wind | Installation of (2) 115 kV circuits out of Barnstable substation to interconnect Cape Wind. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 598 | NSTAR Electric Company | | 11/2010 | Cape Wind | At Canal 345 kV substation, install a redundant breaker in series with breaker #312. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 599 | NSTAR Electric Company | | 11/2010 | Cape Wind | Upgrade the Bourne 115 kV breaker #12272 with an IPT breaker. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 600 | NSTAR Electric Company | | 11/2010 | Cape Wind | Installation of differential insulation and additional grounding at each tower that is common for the 342 and 322 345 kV lines. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1048 | NSTAR Electric Company | | 11/2010 | Cape Wind | Convert Canal 345 kV SPS to include tripping of Cape Wind for the simultaneous loss of 342 and 322 345 kV lines. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1046 | National Grid, USA | | 06/2011 | Queue Position 178 | Reconductor 115 kV F19 Line (Auburn - Brockton Tap). | Proposed | Proposed | 3/10/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1047 | National Grid, USA | | 06/2011 | Queue Position 178 | Replace Bridgewater 115 kV 1631 circuit breaker with 63 kA breaker. | Proposed | Proposed | 3/10/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 622 | Northeast Utilities | | 06/2011 | Queue Position 135 | Interconnection to WMECO's 115-kV 1512 line through a new Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1043 | Northeast Utilities | | 06/2011 | Queue Position 135 | Upgrade the 1768 line terminal equipment at Southwick Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1044 | Northeast Utilities | | 06/2011 | Queue Position 135 | Upgrade the 1512 line terminal equipment at Southwick Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1058 | National Grid, USA | | 06/2011 | Billerica Power | Interconnection to Tewksbury 115 kV Substation via O-193 Line and refurbish section of J-162 line. | Planned | Planned | 7/8/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1059 | National Grid, USA | | 06/2011 | Billerica Power | Re-terminate line tap section (Perry Street) of J-162 Line to new bay position at Tewksbury. | Planned | Planned | 7/8/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1060 | National Grid, USA | | 06/2011 | Billerica Power | Reconductor 2.8 mi. of the M-139 115 kV line. | Planned | Planned | 7/8/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1061 | National Grid, USA | | 06/2011 | Billerica Power | Replace (16) 115 kV circuit breakers at Tewksbury 22 w/ IPT capability if all generators w/ higher Queue Position are constructed. The quantity of breaker upgrades subject to Queued generators constructed. | Planned | Planned | 7/8/2008 | NR | NR | NR |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-------------------------------------|--------------------------|---------------------------------|-----------------|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|
| Generator Interconnection Upgrade | 2a | 1062 | National Grid, USA | | 06/2011 | Billerica Power | Upgrade #137T and #K-137W 115 kV circuit breakers at Sandy Pond (if not completed as part of Merrimack Valley/North Shore Project). | Planned | Planned | 7/8/2008 | NR | NR | NR |
| Elective | 4a | 1057 | Braintree Electric Light Department | | 06/2010 | | Upgrade 115-10-16 underground 115 kV cable. | Planned | Planned | 4/17/2008 | No | TBD | TBD |

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|
| RHODE ISLAND | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 484 | National Grid, USA | | 11/2010 | Greater Rhode Island Transmission Reinforcements ¹ | Add (1) new 115 kV breaker at Woonsocket. | Planned | Planned | 4/25/2008 | No | \$690,000 | \$690,000 |
| Reliability Upgrade | 1a | 791 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | New 115 kV circuit between Somerset and Brayton Point. | Planned | Planned | 4/25/2008 | No | \$11,560,000 | \$11,560,000 |
| Reliability Upgrade | 1a | 913 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Brayton Point substation reinforcements to accommodate the new 115 kV line. | Planned | Planned | 4/25/2008 | No | \$3,250,000 | \$3,250,000 |
| Reliability Upgrade | 1a | 914 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | New third circuit between Somerset and Bell Rock. | Planned | Planned | 4/25/2008 | No | \$28,150,000 | \$28,150,000 |
| Reliability Upgrade | 1a | 915 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Reconductor M13 and L14 between Bell Rock and Dexter + Reconductor 69 kV lines 61 and 62. | Planned | Planned | 4/25/2008 | No | \$19,450,000 | \$19,450,000 |
| Reliability Upgrade | 1a | 916 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Conversion of Jepson 69 kV substation to 115 kV substation. | Planned | Planned | 4/25/2008 | No | \$11,800,000 | \$11,800,000 |
| Reliability Upgrade | 1a | 917 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Bell Rock substation expansion. | Planned | Planned | 4/25/2008 | No | \$7,000,000 | \$7,000,000 |
| Reliability Upgrade | 1a | 918 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Dexter substation changes. | Planned | Planned | 4/25/2008 | No | \$3,180,000 | \$3,180,000 |
| Reliability Upgrade | 1a | 792 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Admiral St-Franklin Square (Q143 and R144) 115 kV UG recabling. | Planned | Planned | 4/25/2008 | No | \$39,200,000 | \$39,200,000 |
| Reliability Upgrade | 1a | 793 | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Somerset substation reinforcements. | Planned | Planned | 4/25/2008 | No | \$6,400,000 | \$6,400,000 |
| Reliability Upgrade | 1a | 786 | National Grid, USA | | 11/2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Terminal upgrades at Drumrock, Chartley Pond, and Brayton Point. | Planned | Planned | 4/25/2008 | No | \$565,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 787 | National Grid, USA | | 12/2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | West Farnum breaker replacements. | Planned | Planned | 4/25/2008 | No | \$7,631,000 | \$7,631,000 |
| Reliability Upgrade | 1a | 788 | National Grid, USA | | 06/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Kent County substation expansion. | Planned | Planned | 4/25/2008 | No | \$42,300,000 | \$42,300,000 |
| Reliability Upgrade | 1a | 789 | National Grid, USA | | 11/2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Reconductoring of T7 115 kV line. | Planned | Planned | 4/25/2008 | No | \$23,304,000 | \$23,304,000 |
| Reliability Upgrade | 1a | 790 | National Grid, USA | | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Berry Street 345/115 kV substation. | Planned | Planned | 4/25/2008 | No | \$50,600,000 | \$50,600,000 |
| Reliability Upgrade | 1a | 1098 | National Grid, USA | | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | 345/115kV line interconnections at Berry Street | Planned | Planned | 4/25/2008 | No | \$37,529,000 | \$37,529,000 |
| Reliability Upgrade | 1a | 190 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | New Millbury to West Farnum (366) 345kV line. | Planned | Planned | 9/24/2008 | No | \$69,600,000 | \$69,600,000 |
| Reliability Upgrade | 1a | 1094 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV Millbury Substation equipment | Planned | Planned | 9/24/2008 | No | \$20,800,000 | \$25,000,000 |
| Reliability Upgrade | 1a | 1095 | National Grid, USA | | 06/2012 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV West Farnum Substation Equipment | Planned | Planned | 9/24/2008 | No | \$73,800,000 | \$73,800,000 |
| Reliability Upgrade | 1a | 794 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | New West Farnum to Connecticut/Rhode Island border (341) 345kV line (to Lake Road). | Planned | Planned | 9/24/2008 | No | \$55,800,000 | \$55,800,000 |
| Reliability Upgrade | 1a | 796 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | 347 Reconductor from Sherman Road to CT/RI Border. | Planned | Planned | 9/24/2008 | No | \$16,400,000 | \$16,400,000 |
| Reliability Upgrade | 1a | 797 | National Grid, USA | | 12/2012 | NEEWS (Interstate Reliability Project) | 3361 Upgrade 345kV terminal equipment at Sherman Road. | Planned | Planned | 9/24/2008 | No | \$8,300,000 | \$8,300,000 |
| Reliability Upgrade | 1a | 795 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | New Kent County to West Farnum 345kV line. | Planned | Planned | 9/24/2008 | No | \$99,900,000 | \$99,900,000 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|
| Reliability Upgrade | 1a | 1106 | National Grid, USA | | 05/2012 | NEEWS (Rhode Island Reliability Project) | Installation of third 345/115kV autotransformer at Kent County. | Planned | Planned | 9/24/2008 | No | Part of \$99,900,000 above | Part of \$99,900,000 above |
| Reliability Upgrade | 1a | 798 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Upgrade of 115kV terminal equipment at Franklin Square. | Planned | Planned | 9/24/2008 | No | \$4,900,000 | \$4,900,000 |
| Reliability Upgrade | 1a | 799 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | G-185N (Kent County-Drumrock) 115 kV reconductor. | Planned | Planned | 9/24/2008 | No | \$4,500,000 | \$4,500,000 |
| Reliability Upgrade | 1a | 1096 | National Grid, USA | | 05/2012 | NEEWS (Rhode Island Reliability Project) | Drumrock substation: Terminal equipment upgrades, Protection modifications and upgrades to meet BPS standards | Planned | Planned | 9/24/2008 | No | \$5,800,000 | \$12,000,000 |
| Reliability Upgrade | 1a | 800 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Reconductoring of short segments of S-171S, T-172N and T-172S with associated terminal equipment upgrades. | Planned | Planned | 9/24/2008 | No | \$7,300,000 | \$10,000,000 |
| Reliability Upgrade | 1a | 1097 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Relocate and Rebuild 115kV lines in the same ROW associated with new 345kV line from W. Farnum to Kent County | Planned | Planned | 9/24/2008 | No | \$129,800,000 | \$129,800,000 |
| Reliability Upgrade | 1a | 1099 | National Grid, USA | | 05/2012 | NEEWS (Rhode Island Reliability Project) | Hartford Ave 115kV terminal equipment upgrades | Planned | Planned | 9/24/2008 | No | \$4,100,000 | \$6,000,000 |
| Reliability Upgrade | 1a | 1109 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | South Wrentham 115kV terminal equipment upgrades | Planned | Planned | 9/24/2008 | No | \$360,000 | \$1,000,000 |

CONNECTICUT

| | | | | | | | | | | | | | |
|---------------------|----|------|-----------------------------|--|---------|---|--|--------------------|--------------------|-----------|------------|---|---|
| Reliability Upgrade | 1a | 211 | Northeast Utilities | | 11/2009 | NU LSP - Rood Ave Substation | New Rood Ave (formerly Windsor) distribution substation with 115kV terminal modifications. | Under Construction | Under Construction | 4/25/2008 | 02/15/2008 | \$9,162,029 | \$9,162,029 |
| Reliability Upgrade | 1a | 1049 | United Illuminating Company | | 12/2010 | | East Shore 115 kV Capacitor Bank Transient Recovery | Planned | Planned | NR | NR | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 582 | Northeast Utilities | | 12/2010 | | Separate 310 and 368 345-KV lines and create 368/1767 DCT | Planned | Planned | 7/18/2008 | No | \$16,000,000 | \$16,000,000 |
| Reliability Upgrade | 1a | 1112 | United Illuminating Company | | 12/2010 | | Water Street 115kV circuit breaker and switch replacements. | Planned | Planned | NR | NR | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 974 | United Illuminating Company | | 12/2011 | | East Shore 115 kV Oil Circuit Breaker & Disconnect Replacements. | Planned | Planned | NR | No | \$6,700,000 | \$6,700,000 |
| Reliability Upgrade | 1a | 816 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | North Bloomfield 2A Substation Expansion - add a second 345/115-kV autotransformer | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1054 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Greater Springfield Reliability Project) | Manchester - Meekville Jct. line (395/1448) separation. | Planned | Planned | 9/24/2008 | No | \$14,000,000 | \$14,000,000 |
| Reliability Upgrade | 1a | 576 | Northeast Utilities | | 12/2013 | NEEWS (Central Connecticut Reliability Project) | Build new 345kV line (3208) North Bloomfield to Frost Bridge. | Planned | Planned | 9/24/2008 | No | \$313,000,000 | \$313,000,000 |
| Reliability Upgrade | 1a | 1114 | Northeast Utilities | | 12/2013 | NEEWS (Central Connecticut Reliability Project) | Frost Bridge 18R substation expansion - add a 345/115kV autotransformer. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Central Connecticut Reliability Project) | Part of NEEWS (Central Connecticut Reliability Project) |
| Reliability Upgrade | 1a | 814 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Central Connecticut Reliability Project) | Reconductor a portion of the Manchester to Scovill Rock 353 345-kV line and terminal work. | Planned | Planned | 9/24/2008 | No | \$9,000,000 | \$9,000,000 |
| Reliability Upgrade | 1a | 802 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Build new 345kV line (3271) Card to Lake Road | Planned | Planned | 9/24/2008 | No | \$251,000,000 | \$251,000,000 |
| Reliability Upgrade | 1a | 1084 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Loop the Millstone - Manchester (310) 345 kV line into the Card substation. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1085 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Card 11F substation expansion | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1086 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to 115kV line 1704, SW Hartford to South Meadow | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1087 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to line 115kV 1722 SW Hartford NW Hartford | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1088 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to 115kV line 1786, East Hartford to Riverside to South Meadow | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1089 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Killingly 3G substation 345kV breaker addition | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-----------------------------|--|---------------------------------|--|--|--------------------|--------------------|----------------------|--------------|--|--|
| Reliability Upgrade | 1a | 1090 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Millstone 15G substation breaker 14T upgrade 50kA | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1091 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Southington 4C substation breaker 19T upgrade to 63kA | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 810 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Lake Road 27E 345 kV substation expansion | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 191 | Northeast Utilities | National Grid, USA | 12/2013 | NEEWS (Interstate Reliability Project) | Build Lake Road to Connecticut/Rhode Island border (341) 345-kV line (to West Farnum). | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 807 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Interstate Reliability Project) | Install 480 MVAR's of capacitors at the Montville 345 kV substation | Planned | Planned | 9/24/2008 | No | \$33,000,000 | \$33,000,000 |
| Reliability Upgrade | 1a | 1092 | Northeast Utilities | | 12/2013 | NEEWS (BPS) 2 | Upgrade the Card 115 kV, East Hartford 115 kV, Agawam 115 kV, Barbour Hill 115 kV, and North Bloomfield 345 kV Substations to BPS standards. | Planned | Planned | 9/24/2008 | No | \$37,000,000 | \$37,000,000 |
| Reliability Upgrade | 1a | 1056 | Northeast Utilities | | 12/2011 | CT LSP - Sherwood Substation | Sherwood Substation - add a 115/13.8-kV substation with two transformers and a 115-kV circuit breaker. | Planned | Planned | 12/12/2008 | No | \$9,751,000 | \$9,751,000 |
| Reliability Upgrade | 1a | 1110 | United Illuminating Company | | 12/2010 | | Broadway 115/13.8 kV Substation Addition | Planned | Planned | 12/8/2008 | No | \$1,200,000 | \$1,200,000 |
| Reliability Upgrade | 1a | 1111 | United Illuminating Company | | 12/2010 | | Metro North Union Avenue 115/26.4 kV Substation | Planned | Planned | 1/7/2009 | No | \$10,543,000 | \$10,543,000 |
| Reliability Upgrade | 1a | 976 | United Illuminating Company | | 05/2012 | | Grand Avenue 115 kV Switching Station Rebuild. | Planned | Planned | 1/7/2009 | No | \$48,000,000 | \$48,000,000 |
| Reliability Upgrade | 1a | 879 | | Bangor Hydro-Electric Company, New England Power Company, Northeast Utilities System Com | TBD | Dynamic Swing Reorder Project | Upgrade 7 of 8 Dynamic Swing Recorders in New England to comply with NERC, NPCC, and ISO-NE Standards. | Planned | Planned | 03/01/2007 | NR | \$420,000 | \$420,000 |
| Generator Interconnection Upgrade | 2a | 983 | Northeast Utilities | | 09/2012 | Queue Position 207/241 | Rebuild 115 kV 1585N Line between new substation and Bunker Hill. | Proposed | Proposed | 9/26/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1107 | Northeast Utilities | | 09/2012 | Queue Position 207/241 | Interconnection to new 115 kV substation consisting of (14) circuit breakers in a breaker and a half configuration that sectionalizes the existing 1575, 1585, and 1990 lines. | Proposed | Proposed | 9/26/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1108 | Northeast Utilities | | 09/2012 | Queue Position 207/241 | Installation of a 2.5% series reactor on the 1990S Line at the new substation. | Proposed | Proposed | 9/26/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 331 | Northeast Utilities | | 10/2009 | Kleen Energy | Install 5-breaker ring bus interconnecting between Scovill Rock and Manchester on the 345 kV 353 Line. | Under Construction | Under Construction | 10/08/2003 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1121 | Northeast Utilities | | 10/2009 | Queue Position 161-2 | Four units connected to 384 line through a new 345kV Substation; unit #4 will also connect to Substation | Proposed | Planned | 12/8/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1149 | Northeast Utilities | | 06/2010 | Queue Position 161-1 | Four units connected at Devon Substation | | Under Construction | 12/8/2007 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1122 | Northeast Utilities | | 11/2010 | Queue Position 191 | One turbine connected to #1238 Line (Frost Bridge to Carmel) via a new 3-breaker ring bus Substation | Proposed | Proposed | 2/24/2009 | NR | NR | NR |
| Reliability Upgrade | 1a | 1050 | United Illuminating Company | | 12/2011 | | Devon Tie 115kV Switching Station BPS Compliance | Planned | Planned | NR | NR | \$2,620,000 | \$2,620,000 |

TABLE B

MAINE

| | | | | | | | | | | | | | |
|---------------------|----|------|-------------------------------|--|---------|---|---|----------|----------|----|----|-----------|-----------|
| Reliability Upgrade | 1b | 148 | Central Maine Power Company | | 06/2012 | CMP LSP - Saco Bay Area Reinforcement Project | Establish a new Vallee Lane 115/34.5 kV substation and 115 kV line from Louden S/S to Vallee Lane Substation. | Proposed | Proposed | No | NR | \$100,000 | \$100,000 |
| Reliability Upgrade | 1b | 1116 | Bangor Hydro-Electric Company | | 12/2011 | Maine Power Reliability Program (MPRP) | L 64 Rebuild | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 1031 | Bangor Hydro-Electric Company | | 01/2012 | Maine Power Reliability Program (MPRP) | Rebel Hill Switching Station, Rebuild Line 66, and Capacitor Bank Additions (10MVar at Trenton, Downeast & Hancock County area) | Concept | Concept | No | No | TBD | TBD |

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (1.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|----------------------|-------|------------|--------------------------------|--------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|------------------------------|------------------------------|
| Reliability Upgrade | 1b | 1130 | Central Maine Power Company | | 12/2011 | Sturtevant Improvements | Add 115kV circuit breakers & 25 MVAR capacitor bank at Sturtevant Substation; Re-rate Section 63 between Wyman Hydro & Madison Substation | Proposed | Proposed | No | No | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1b | 1131 | Central Maine Power Company | | 12/2011 | CMP-LSP Bowman St. Substation | Add 115/34kV transformer | Proposed | Proposed | No | NR | \$600,000 | \$600,000 |
| Reliability Upgrade | 1b | 1132 | Central Maine Power Company | | 12/2011 | CMP-LSP Maxcy's Substation | Add 115/34kV transformer (coordinate with MPRP) | Proposed | Proposed | No | NR | \$600,000 | \$600,000 |
| Reliability Upgrade | 1b | 1133 | Central Maine Power Company | | 10/2010 | CMP-LSP Leeds Substation | Add 115/34kV Leeds Substation & new 34kV line from Leeds to Turner | Proposed | Proposed | No | NR | \$300,000 | \$300,000 |
| Reliability Upgrade | 1b | 1135 | Central Maine Power Company | | TBD | CMP-Athens Substation LSP | Add two 115kV circuit breakers on Section 66; and 115/12kV transformer | Proposed | Proposed | No | No | \$1,500,000 | \$1,500,000 |
| Elective | 4b | 1018 | Bangor Hydro-Electric Company | | TBD | Orrington-Boston HVDC | Orrington substation reconfiguration and addition of new HVDC cable system terminating in Boston area. | Concept | Concept | No | No | TBD | TBD |
| Elective | 4b | 984 | Central Maine Power Company | Maine Public Service | TBD | MEPCO-MPS 345 kV Interconnection | MEPCO-MPS 345 kV Interconnection. | Concept | Concept | No | No | TBD | TBD |
| NEW HAMPSHIRE | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 275 | Northeast Utilities | | TBD | | Merrimack 115-kV substation - Protection Separation Upgrade. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 1143 | Northeast Utilities | | TBD | | Littleton 115kV breaker addition and reconfiguration | Proposed | Proposed | No | No | \$5,338,000 | \$5,338,000 |
| VERMONT | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 318 | Vermont Electric Power Company | | 12/2011 | | Rebuild the existing Georgia substation 115 kV bus into a ring bus to address reliability problems through the 1,250 MW Vermont state load level. | Concept | Concept | No | No | \$9,000,000 | \$9,000,000 |
| Reliability Upgrade | 1b | 325 | Vermont Electric Power Company | | 12/2011 | VELCO LSP - Chelsea Substation | Replace (2) SCADA controlled motorized disconnect switches with 115 kV circuit breakers at the existing Chelsea substation to maintain adequate supply to the load. | Concept | Concept | No | No | \$5,000,000 | \$5,000,000 |
| Reliability Upgrade | 1b | 324 | Vermont Electric Power Company | | 12/2012 | | Granite to Middlesex 230-kV line with necessary substation upgrades to mitigate several reliability concerns, including those related to the potential Highgate contract termination. | Concept | Concept | No | No | \$100,000,000 | \$100,000,000 |
| MASSACHUSETTS | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 785 | National Grid, USA | | 07/2017 | Merrimack Valley/North Shore Reliability Project | Re-conductor F-158N (Golden Hills-Maplewood-Everett) 115 kV line. | Concept | Concept | No | No | \$1,330,000 | \$1,330,000 |
| Reliability Upgrade | 1b | 963 | NSTAR Electric Company | | 12/2009 | Boston Area 115 kV Enhancements | Add a new 115kV breaker # 11 Relocate 447-509 and add control and protect at Holbrook. | Proposed | Proposed | No | No | \$4,000,000 | \$4,000,000 |
| Reliability Upgrade | 1b | 842 | NSTAR Electric Company | | 06/2010 | Boston Area 115 kV Enhancements | Add 115 kV 54 MVAR capacitor bank at W. Framingham. | Proposed | Proposed | No | No | \$3,000,000 | \$3,700,000 |
| Reliability Upgrade | 1b | 1153 | NSTAR Electric Company | | 06/2010 | Boston Area 115 kV Enhancements | Reliability Upgrades at West Framingham Station | Concept | No | No | | \$3,000,000 | |
| Reliability Upgrade | 1b | 843 | NSTAR Electric Company | | 12/2013 | Boston Area 115 kV Enhancements | Install (2) new 115 kV breakers at Trapelo Road. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 965 | NSTAR Electric Company | | 12/2012 | Boston Area 115 kV Enhancements | Add third 115kV line from Walpole to Holbrook | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 964 | NSTAR Electric Company | | 06/2011 | Boston Area 115 kV Enhancements | Relocate 115kV terminals at W. Walpole to mitigate breaker failure #8. | Proposed | Proposed | No | No | \$5,600,000 | \$5,600,000 |
| Reliability Upgrade | 1b | 969 | NSTAR Electric Company | | 06/2018 | Boston Area 115 kV Enhancements | Add a new 54 MVAR capacitor bank at Chelsea. | Concept | Concept | No | No | \$1,200,000 | \$1,200,000 |
| Reliability Upgrade | 1b | 301 | NSTAR Electric Company | | 12/2011 | Boston Area 115 kV Enhancements | Reconductor 115-kV circuits 320-507 and 320-508. | Concept | Concept | No | No | \$4,600,000 | \$4,600,000 |
| Reliability Upgrade | 1b | 1113 | NSTAR Electric Company | | 12/2010 | | Install KSt Breaker #31 | Proposed | Proposed | No | No | \$2,100,000 | \$2,960,000 |
| Reliability Upgrade | 1b | 593 | NSTAR Electric Company | | 2013 | Mid Cape Reliability Project | Add a new 115 kV line from Canal to Barnstable/Falmouth | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 1068 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Install a new 345kV line from Carver to Sandwich and a a 345-115kV auto-transformer at Sandwich | Proposed | Proposed | No | No | \$110,000,000 | \$110,000,000 |
| Reliability Upgrade | 1b | 592 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Separate existing 345kV double circuit Cape Cod Canal crossing | Proposed | Proposed | No | No | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (1.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-----------------------------|--------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|------------------------------|------------------------------|
| Reliability Upgrade | 1b | 1118 | NSTAR Electric Company | National Grid, USA | 12/2012 | Long Term Lower SEMA Upgrades | Upgrade 115kV line D21 | Proposed | Proposed | No | No | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1b | 1067 | NSTAR Electric Company | | 12/2010 | NPCC BPS Compliance | Tremont Station | Proposed | Proposed | No | No | \$11,200,000 | \$12,800,000 |
| Reliability Upgrade | 1b | 1066 | NSTAR Electric Company | | 09/2011 | NPCC BPS Compliance | Needham Station | Concept | Concept | No | No | \$9,300,000 | \$9,300,000 |
| Reliability Upgrade | 1b | 1065 | NSTAR Electric Company | | 07/2012 | NPCC BPS Compliance | Waltham Station | Concept | Proposed | | No | \$24,300,000 | \$26,600,000 |
| Reliability Upgrade | 1b | 970 | NSTAR Electric Company | | 12/2012 | Greater Boston Reliability Project | Add a new 345 kV line from Lexington to Waltham. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 971 | NSTAR Electric Company | | 12/2012 | Greater Boston Reliability Project | Add a new 345/230 kV auto at Waltham and 230 kV switching facilities. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 1119 | NSTAR Electric Company | | 12/2010 | Greater Boston Reliability Project | Upgrade West Medway-West Walpole 345kV line #325 | Proposed | Proposed | No | No | \$2,200,000 | \$2,200,000 |
| Reliability Upgrade | 1b | 1120 | NSTAR Electric Company | | 06/2010 | | Install 345kV 160 MVAR shunt reactor at W. Walpole | Proposed | Proposed | No | No | \$7,200,000 | \$7,200,000 |
| Reliability Upgrade | 1b | 956 | National Grid, USA | | 05/2013 | Central/Western Massachusetts Upgrades | Carpenter Hill - replace one 345 kV, 448 MVA autotransformer and upgrade thermal rating of bus to at least 580 MVA. | Concept | Concept | No | No | \$7,021,534 | \$7,021,534 |
| Reliability Upgrade | 1b | 1136 | National Grid, USA | | 12/2012 | | New 115kV Switching Station at Devens Convert 69kV lines to 115kV, Reconfigure 115kV Supply at Ayer Substation | Proposed | Proposed | 7/28/2009 | No | \$9,200,000 | \$9,200,000 |
| Reliability Upgrade | 1b | 824 | Northeast Utilities | | TBD | Pittsfield / Greenfield Project | Reconductor the Woodland to Pleasant 1371 115-kV line and terminal work at Woodland substation. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 825 | Northeast Utilities | | TBD | Pittsfield / Greenfield Project | Upgrade the Pleasant to Blanford 115-kV line and the Blanford to Granville Jct. portion of the 115-kV line 1512. | Concept | Concept | No | No | TBD | TBD |
| Generator Interconnection Upgrade | 2b | 863 | Northeast Utilities | | 06/2010 | Queue Position 217 | Northfield Mountain - W. Mass Northfield 345 kV substation. | Proposed | Proposed | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 1014 | Northeast Utilities | | 06/2010 | Queue Position 196 | 345 kV Northfield Substation | Concept | Concept | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 1123 | Northeast Utilities | | TBD | Queue Position 236 | New Substation on 1302 Line; terminal upgrades at Buck Pond and Agawam | Concept | Concept | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 880 | National Grid, USA | Northeast Utilities | 06/2011 | Queue Position 177 | Sutton Energy - 345 kV Carpenter Hill-Millbury Line. | Concept | Concept | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 1042 | National Grid, USA | | 06/2013 | Queue Position 165 | Replace (2) 345 kV circuit breakers at Sandy Pond | Concept | Concept | No | NR | NR | NR |
| RHODE ISLAND | | | | | | | | | | | | | |
| Generator Interconnection Upgrade | 2b | 881 | National Grid, USA | Northeast Utilities | 06/2012 | Queue Position 201 | RISEP - 345 kV RISE Substation. | Concept | Concept | No | NR | NR | NR |
| CONNECTICUT | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 1055 | Northeast Utilities | | 2010 | CT LSP - Waterside Substation | Waterside Substation - add a 115/13.2-kV transformer and a 115-kV circuit breaker. | Concept | Concept | No | No | \$4,107,000 | \$4,107,000 |
| Reliability Upgrade | 1b | 809 | Northeast Utilities | | 12/2009 | | Upgrade terminal equipment at Bunker Hill 115 kV substation. | Proposed | Proposed | No | No | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1b | 1150 | United Illuminating Company | | 10/2011 | | Grand Avenue - West River 115 kV Pumping Plant Replacements | Proposed | Proposed | NR | NR | | \$1,200,000 |
| Reliability Upgrade | 1b | 1151 | United Illuminating Company | | 12/2011 | | West River 115kV Switching Station Fault Duty Migration | Proposed | Proposed | NR | NR | | \$3,500,000 |
| Reliability Upgrade | 1b | 721 | United Illuminating Company | | 06/2013 | | New Shelton 115/13.8 kV substation | Proposed | Proposed | No | No | \$11,300,000 | \$11,300,000 |
| Reliability Upgrade | 1b | 975 | United Illuminating Company | | 12/2013 | | Pequonnock 115 kV Fault Duty Mitigation. | Concept | Concept | No | No | \$44,300,000 | \$44,300,000 |
| Reliability Upgrade | 1b | 699 | United Illuminating Company | | 12/2012 | | Naugatuck Valley 115 kV reliability improvement. | Concept | Concept | No | No | \$10,000,000 | \$10,000,000 |
| Reliability Upgrade | 1b | 1147 | Northeast Utilities | | 2011 | | Waterside Substation - install a three-breaker 115kV ring bus | Proposed | Proposed | No | No | | \$4,000,000 |

Notes
 - Black shading indicates change from July '09 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | PPA (I.3.9) Approval | TCA Approval | Jul-09 Estimated PTF Costs | Oct-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---------------------|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|
| Reliability Upgrade | 1b | 1148 | Northeast Utilities | | 2011 | | Add a 2nd high speed relay on the Glensbrook to Waterside 115kV 1440 | | Proposed | No | No | | \$600,000 |
| Reliability Upgrade | 1b | 801 | Northeast Utilities | | TBD | | Build Manchester to East Hartford 115-kV cable with a series reactor. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 85 | Northeast Utilities | | TBD | | Upgrade the South Meadow Substation to Bulk Power System standards (BPS). | Concept | Concept | 08/04/2004 | No | TBD | TBD |
| Generator Interconnection Upgrade | 2b | 1124 | Northeast Utilities | | TBD | Queue Position 2422 | New Substation on Haddam Neck-Southington 345kV line | Proposed | Proposed | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 1125 | Northeast Utilities | | TBD | Queue Position 240 | 345kV on Montville Substation | Concept | Concept | No | NR | NR | NR |

IN-SERVICE PROJECTS

| | | | | | | | | | | | | | |
|-----------------------------------|----|------|--------------------------------|-----------------------------|---------|---|---|--------------------|------------|------------|----|--|--|
| Reliability Upgrade | 1a | 1051 | Central Maine Power Company | | 09/2009 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Riley 115 kV capacitor bank. | Under Construction | In-service | 11/30/2007 | No | Part of Project 625 | Part of Project 625 |
| Generator Interconnection Upgrade | 2a | 1134 | Central Maine Power Company | | 09/2009 | Kibby Wind Farm | Separate Section 215 from Section 63 and terminate Section 215 at newly established breaker position in Wyman Hydro S/S, which includes re-rating of Section 215. Expand Bigelow S/S & add capacitor banks at Lakewood, Guilford, Wyman Hydro Station & Sturtevant S/S's. | Under Construction | In-service | 6/16/2006 | NR | NR | NR |
| Reliability Upgrade | 1a | 267 | Northeast Utilities | Central Maine Power Company | 8/2009 | Y138 Closing | White Lake - Saco Valley (Y138) Line Closing - Add PAR on Y138 at Saco Valley, retension lines, upgrade Beebe terminal, and add capacitor banks at White Lake and Beebe. | Under Construction | In-service | 01/01/2006 | No | \$27,775,000 | \$27,775,000 |
| Reliability Upgrade | 1a | 936 | National Grid, USA | | 07/2009 | Central/Western Massachusetts Upgrades | Reconductor (P142/P142S) Rolfe Avenue - West Bolyston 115 kV line w/1590 ACSR. | Under Construction | In-service | 12/17/2007 | No | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 176 | Northeast Utilities | | 07/2009 | Monadnock Area Reliability Project | New Fitzwilliam 345/115kV substation along with 345 kV breakers. | Under Construction | In-service | 9/27/2007 | No | \$76,100,000 | \$76,100,000 |
| Reliability Upgrade | 1a | 174 | National Grid, USA | | 06/2009 | Monadnock Area Reliability Project | Reconductor I-135 (Bellows Falls-Monadnock Tap-Flag Pond) 115 kV line. | Under Construction | In-service | 03/24/2006 | No | \$15,778,000 | \$15,778,000 |
| Reliability Upgrade | 1a | 832 | NSTAR Electric Company | | 07/2009 | Short Term Lower SEMA Upgrades | Add(1) 115kV SVC (0-112 MVARs lagging) at Barnstable. | Under Construction | In-service | 08/17/2007 | No | \$82 M (Total NSTAR Project Cost Including Brook St. Station upgrade | \$82 M (Total NSTAR Project Cost Including Brook St. Station upgrade |
| Reliability Upgrade | 1a | 182 | Vermont Electric Power Company | | 09/2009 | Monadnock Area Reliability Project | Upgrade bus cable at N. Rutland and K35 115 kV breaker at Rutland. | Under Construction | In-service | 03/24/2006 | NR | \$1,000,000 | \$1,000,000 |

CANCELLED PROJECTS

| | | | | | | | | | | | | | |
|---------------------|----|------|------------------------|--|---------|-------------------------------|--|----------|-----------|----|----|------------------------------|------------------------------|
| Reliability Upgrade | 1b | 1117 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Install 115kV 50 MVAR capacitor bank at Falmouth | Proposed | Cancelled | No | No | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA |
|---------------------|----|------|------------------------|--|---------|-------------------------------|--|----------|-----------|----|----|------------------------------|------------------------------|

| Notes | | |
|--|--|--|
| ¹ Project pending solution documentation for the Greater Rhode Island Transmission Reinforcements. | | |
| ² The Northeast Utilities' estimated costs for the NEEWS BPS upgrades are shared among the Greater Springfield, Central Connecticut, and Interstate portions of the NEEWS Project. | | |
| ³ The total TCA (NU-07-TCA-24) PTF cost is \$234.2 million for the Norwalk - Glenbrook Project. The forecasted PTF cost is \$249.4 million. | | |
| ⁴ The total TCA (NU-08-TCA-01) PTF cost is \$1.05 billion for Northeast Utilities portion of the Middletown-Norwalk Project. The forecasted PTF cost is \$978.2 million. | | |
| Local Project Listing Links | | |
| NSTAR: http://www.nstar.com/business/rates_tariffs/open_access/ | | |
| CMP: http://www.cmpco.com/SuppliersAndPartners/TransmissionServices/CMPTransmissionSvc/lsp.html | | |
| BHE: http://www.bhe.com/data/OASIS/LSP.html | | |
| VELCO: http://www.vermontspc.com/default.aspx | | |
| NU: http://www.transmission-nu.com/business/ferc890postings.asp | | |
| NGRID: http://www.nationalgridus.com/oasis/filings_studies.asp | | |
| UI: http://www.uinet.com/uinet/resources/file/ebcfda4cb73dd/U1%20Local%20System%20Plan.pdf | | |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------------|--------------------------|---------------------------------|---|---|---------------|--------------------|----------------------|--------------|--|---|
| TABLE A | | | | | | | | | | | | | |
| MAINE | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 575 | Central Maine Power Company | | 05/2009 | Heywood Road Project | New Heywood Rd 115kV switchyard with (6) 115kV circuit breakers (3) 115kV line retensionings and 115kV 20 MVAR capacitor bank at Heywood Rd. | Concept | Under Construction | 01/01/2007 | 1/26/2009 | \$6,100,000 | \$7,000,000 |
| Reliability Upgrade | 1a | 1129 | Central Maine Power Company | | 12/2012 | Heywood Road Project | New 115kV line between Wyman Hydro and Heywood Rd. parallel to exiting Section 83. Install a 115kV circuit breaker at Wyman Hydro termination | | Planned | 1/26/2009 | No | | \$19,500,000 |
| Reliability Upgrade | 1a | 626 | Central Maine Power Company | | 04/2009 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of 115/34.5 kV transformer and six new 115 kV breakers and a half substation at Woodstock. | Planned | Planned | 11/30/2007 | No | \$7,400,000 | \$8,000,000 |
| Reliability Upgrade | 1a | 1051 | Central Maine Power Company | | 05/2009 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Riley 115 kV capacitor bank. | Planned | Planned | 11/30/2007 | No | Portion of 5,400,000 (above) | Part of Project 625 |
| Reliability Upgrade | 1a | 625 | Central Maine Power Company | | 02/2010 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Rumford Industrial Park capacitor bank. | Planned | Planned | 11/30/2007 | No | \$5,400,000 | \$5,400,000 |
| Reliability Upgrade | 1a | 624 | Central Maine Power Company | | 2010 | Rumford-Woodstock-Kimball Road Corridor Project | Install 115 kV line (New Page - Rumford Industrial Park). | Planned | Planned | 11/30/2007 | No | Portion of 5,400,000 (above) | Part of project 625 |
| Reliability Upgrade | 1a | 1127 | Central Maine Power Company | | 05/2009 | CMP-LSP Newcastle Substation | Add 115/34kV transformer with two 115kV breakers | | Under Construction | 8/20/2008 | 8/20/2008 | | \$1,300,000 |
| Reliability Upgrade | 1a | 1128 | Central Maine Power Company | | 07/2010 | CMP-LSP Hotel Road Substation | Add 115/34kV transformer with 115kV breaker at Hotel Rd. | | Planned | 8/20/2008 | No | | \$800,000 |
| Reliability Upgrade | 1a | 144 | Bangor Hydro-Electric Company | | 12/2010 | Keene Rd Autotransformer | Installation of a 345/115 kV autotransformer at Keene Rd Substation. | Proposed | Under Construction | No | No | \$20,000,000 | \$29,000,000 |
| Reliability Upgrade | 1a | 905 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Orrington-Albion Rd-Coopers Mills, Coopers Mills-Larrabee Road, Larrabee Road-Suroweit). | Planned | Planned | 7/31/2008 | No | \$1,354,000,000 | \$1,510,000,000 |
| Reliability Upgrade | 1a | 906 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 115kV line construction (Orrington-Coopers Mills, Coopers Mills-Highland, Larrabee Road-Lewiston Lower, Larrabee Road-Livermore Falls, Livermore Falls-Rumford IP) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 907 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Rebuild Existing 115kV lines: Sections 86 (Buckspport-Belfast), Section 84 (Albion Road-Coopers Mills), Section 203 (Detroit-Orrington), Section 80 (Coopers Mills-Highland), Sections 60 & 212 (Coopers Mills-Bowman St-Larrabee Road), Sections 89 & 229 (Livermore Falls-Riley-Rumford IP) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 908 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Albion Road, Larrabee Road) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 909 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New capacitor (10.8 MVAR at Belfast) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1025 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | Separation of Double Circuit Towers (345kV Kennebec River Crossing 375/377 & Maine Yankee 375/392, 115kV Bucksport 65/205) and Maine Yankee 345 kV re-termination | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1026 | Central Maine Power Company | Northeast Utilities | 12/2012 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Surowiec-Raven Farm, South Gorham-Maguire Road, Maguire Road-Three Rivers) | Planned | Planned | 7/31/2008 & 2/26/09 | No | \$70,000,000 (NU portion of MPRP) | Portion of CMP \$1.51B and portion of NU is \$35.1M |
| Reliability Upgrade | 1a | 1027 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 115kV Line Construction (Elm Street-East Deering, East Deering -Cape) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1028 | Central Maine Power Company | Northeast Utilities | 12/2012 | Maine Power Reliability Program (MPRP) | Rebuild existing 115kV Line (Section 250, Maguire Rd-Three Rivers) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Portion of CMP \$1.354B and portion of NU is TBD | Portion of CMP \$1.51B and portion of NU is TBD |
| Reliability Upgrade | 1a | 1029 | Central Maine Power Company | | 12/2009 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformer at South Gorham | Planned | Under Construction | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|--------------------------------|-----------------------------|---------------------------------|--|---|--------------------|--------------------|----------------------|--------------|---|---|
| Reliability Upgrade | 1a | 1030 | Central Maine Power Company | | 12/2012 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Raven Farm, Maguire Road) | Planned | Planned | 7/31/2008 & 2/26/09 | No | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 143 | Bangor Hydro-Electric Company | | 12/2012 | Down East Reliability Improvement | Contract 115 kV from Trenton tap (part of Hancock Reliability Project) to new Tunk Lake Substation to Harrington Substation. | Planned | Planned | 5/10/2006 | 6/13/2008 | \$66,100,000 | \$66,100,000 |
| Generator Interconnection Upgrade | 2a | 1134 | Central Maine Power Company | | 12/2010 | Kibby Wind Farm | Separate Section 215 from Section 63 and terminate Section 215 at newly established breaker position in Wyman Hydro S/S, which includes re-rating of Section 215. Expand Bigelow S/S & add capacitor banks at Lakewood, Guilford, Wyman Hydro Station & Sturtevant S/S's. | | Planned | 6/16/2006 | NR | | NR |
| Generator Interconnection Upgrade | 2a | 770 | Central Maine Power Company | | TBD | Queue Position 137 | Installation of New Page Substation (aka Railroad Street Substation) with (3) circuit breakers tapping Section 218 115 kV. | Proposed | Proposed | 3/18/2007 | NR | NR | NR |
| NEW HAMPSHIRE | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 267 | Northeast Utilities | Central Maine Power Company | 07/2009 | Y138 Closing | White Lake - Saco Valley (Y138) Line Closing - Add PAR on Y138 at Saco Valley, retention lines, upgrade Beebe terminal, and add capacitor banks at White Lake and Beebe. | Under Construction | Under Construction | 01/01/2006 | No | \$28,412,000 | \$27,775,000 |
| Reliability Upgrade | 1a | 174 | National Grid, USA | | 07/2009 | Monadnock Area Reliability Project | Reconductor I-135 (Bellows Falls-Monadnock Tap-Flagg Pond) 115 kV line. | Planned | Under Construction | 03/24/2006 | No | \$9,600,000 | \$9,600,000 |
| Reliability Upgrade | 1a | 176 | Northeast Utilities | | 8/2009 | Monadnock Area Reliability Project | New Fitzwilliam 345/115kV substation along with 345 kV breakers. | Under Construction | Under Construction | 9/27/2007 | No | \$76,100,000 | \$76,100,000 |
| Reliability Upgrade | 1a | 680 | National Grid, USA | | 11/2011 | | Rebuild Bellows Falls Substation and install 115 kV capacitor bank. | Planned | Planned | 1/28/2008 | No | \$11,497,000 | \$11,497,000 |
| Reliability Upgrade | 1a | 674 | National Grid, USA | | 10/2012 | | Replace Comerford 230 kV breakers and add (1) 230 kV bus tie breaker. | Planned | Planned | 4/1/2008 | No | \$12,000,000 | \$12,000,000 |
| Generator Interconnection Upgrade | 2a | 724 | National Grid, USA | | 11/2009 | NGRID Comerford Substation | NGRID Comerford Substation. | Planned | Planned | 6/12/2007 | NR | NR | NR |
| VERMONT | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 320 | Vermont Electric Power Company | | 09/2009 | Lamoille County Project | Middlesex Substation 115 kV breaker addition. | Under Construction | Under Construction | 08/16/2007 | 02/07/2008 | \$4,857,000 | \$4,857,000 |
| Reliability Upgrade | 1a | 322 | Vermont Electric Power Company | | 09/2009 | Lamoille County Project | Installation of new Duxbury Substation that involves looping in and out of the Middlesex - Essex 115 kV (K24) line. | Under Construction | Under Construction | 08/16/2007 | 02/07/2008 | Part of Lamoille County Project | Part of Lamoille County Project |
| Reliability Upgrade | 1a | 139 | Vermont Electric Power Company | | 12/2010 | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 2: synchronous condensers expanded to +200/- 100 MVAR and two 25 MVAR capacitor banks. | Planned | Planned | 01/10/2003 | 03/31/2003 | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 182 | Vermont Electric Power Company | | 09/2009 | Monadnock Area Reliability Project | Upgrade bus cable at N. Rutland and K35 115 kV breaker at Rutland. | Planned | Under Construction | 03/24/2006 | No | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 321 | Vermont Electric Power Company | | 12/2009 | | Burlington 115kV Loop - 5 mi of new line & rebuilding 5 miles of existing line between two existing substations with expansion of the East Avenue substation. | Planned | Under Construction | 10/24/2006 | 05/23/2007 | \$25,142,000 | \$25,142,000 |
| Reliability Upgrade | 1a | 323 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project | New VY - Newfane - Coolidge 345 kV line with requisite station upgrades. | Planned | Under Construction | 10/1/2008 | No | \$135,300,000 | \$136,368,000 |
| Reliability Upgrade | 1a | 1032 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project | Installation of a new 345/115kV substation called Vernon including a new 345/115kV autotransformer | Planned | Under Construction | 10/1/2008 | No | \$64,600,000 | \$69,815,000 |
| Reliability Upgrade | 1a | 1033 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project (VELCO LSP - Newfane Substation) | Installation of a new 345/115kV substation called Newfane | Planned | Under Construction | 10/1/2008 | No | \$38,500,000 | \$16,664,000 |
| Reliability Upgrade | 1a | 1034 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project | Loop new 345kV Line into Newfane Substation. | Planned | Under Construction | 10/1/2008 | No | \$18,000,000 | Part of project 323 |
| Reliability Upgrade | 1a | 1035 | Vermont Electric Power Company | | 06/2011 | Vermont Southern Loop Project | Expansion of Coolidge 345kV substation | Planned | Under Construction | 10/1/2008 | No | \$18,000,000 | \$20,117,000 |
| Generator Interconnection Upgrade | 2a | 1036 | Vermont Electric Power Company | | 12/2009 | Queue Position 172 | Installation of 3-breaker 115kV ring bus interconnection of the St. Johnsbury-Irasburg 115kV K39 line. | Planned | Planned | 08/16/2007 | NR | NR | NR |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|----------------------|-------|------------|-------------------------|--------------------------|---------------------------------|--|--|--------------------|--------------------|----------------------|--------------|----------------------------|-------------------------------------|
| MASSACHUSETTS | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 887 | National Grid, USA | | 05/2012 | Auburn Area Transmission System Upgrades | Expand Auburn St Substation to include 2nd 345/115 kV autotransformer and 345 kV ring bus. | Planned | Planned | 1/28/2008 | No | \$30,000,000 | \$30,000,000 |
| Reliability Upgrade | 1a | 921 | National Grid, USA | | 01/2012 | Auburn Area Transmission System Upgrades | Bridgewater substation - Upgrade Bus work and convert to BPS substation. | Planned | Planned | 1/28/2008 | No | \$12,100,000 | \$12,100,000 |
| Reliability Upgrade | 1a | 919 | National Grid, USA | | 12/2012 | Auburn Area Transmission System Upgrades | Dupont substation - Upgrade Buswork and convert to BPS substation. | Planned | Planned | 1/28/2008 | No | \$4,600,000 | \$4,600,000 |
| Reliability Upgrade | 1a | 840 | NSTAR Electric Company | | 10/2010 | Merrimack Valley/North Shore Reliability Project | Upgrade the 115 kV line (Line 423-515) from Mystic-Everett by adding a new parallel cable to the existing 115 kV cable. (NSTAR portion only) | Concept | Planned | 4/1/2008 | No | \$5,400,000 | \$7,300,000 |
| Reliability Upgrade | 1a | 775 | National Grid, USA | | 06/2012 | Merrimack Valley/North Shore Reliability Project | Addition of 4 breakers and relocation of T1 and T2 into new bays at Sandy Pond. | Planned | Planned | 6/27/2008 | No | \$20,100,000 | \$20,100,000 |
| Reliability Upgrade | 1a | 777 | National Grid, USA | | 11/2009 | Merrimack Valley/North Shore Reliability Project | Build Wakefield Junction station with four 345/115 kV autotransformers. | Under Construction | Under Construction | 4/1/2008 | No | \$95,000,000 | \$95,000,000 |
| Reliability Upgrade | 1a | 161 | National Grid, USA | | 11/2009 | Merrimack Valley/North Shore Reliability Project | Loop 345 kV 339 line and 115 kV S-145/T-146 into new Wakefield Jct. Substation. | Under Construction | Under Construction | 4/1/2008 | No | \$3,200,000 | \$4,986,431 |
| Reliability Upgrade | 1a | 779 | National Grid, USA | | 04/2010 | Merrimack Valley/North Shore Reliability Project | Bypass and remove Golden Hills 345 kV substation. | Under Construction | Under Construction | 4/1/2008 | No | \$4,000,000 | \$5,132,609 |
| Reliability Upgrade | 1a | 776 | National Grid, USA | | 06/2012 | Merrimack Valley/North Shore Reliability Project | Re-conductor O-167 (NGRID portion of Mystic - Everett) 115 kV line. | Planned | Planned | 6/27/2008 | No | \$2,865,876 | \$2,865,876 |
| Reliability Upgrade | 1a | 782 | National Grid, USA | | 10/2013 | Merrimack Valley/North Shore Reliability Project | Replace existing S145/T146 UG cables with higher capacity cables between Salem Harbor n Railyard. | Planned | Planned | 6/27/2008 | No | \$37,600,000 | \$38,100,000 |
| Reliability Upgrade | 1a | 961 | NSTAR Electric Company | | 11/2010 | Mystic Breaker Additions Project | Install (2) new 115 kV East Bus breakers #30 and #32 at Mystic and move Transformer 110B Connection. | Planned | Planned | 3/10/2008 | No | \$3,800,000 | \$3,800,000 |
| Reliability Upgrade | 1a | 302 | NSTAR Electric Company | | 07/2009 | Boston Area 115 kV Enhancements | DCT separation of Framingham to Speen St. 433-507 circuit. | Under Construction | Under Construction | 01/18/2005 | 03/01/2005 | \$3,100,000 | \$3,100,000 |
| Reliability Upgrade | 1a | 903 | NSTAR Electric Company | | 12/2009 | Mystic IPT Breaker Project | Upgrade (4) 115 kV breakers #2, #4, #5, and #16 at Mystic to IPT and separate controls with Boston Gen units #5 and #6. | Planned | Planned | NR | NR | \$1,240,000 | \$1,240,000 |
| Reliability Upgrade | 1a | 904 | NSTAR Electric Company | | 12/2010 | Mystic IPT Breaker Project | Upgrade (5) 115 kV breakers #1, #7, #15 #19 and #20 at Mystic to IPT and separate controls with Boston Gen #4. | Planned | Planned | NR | NR | \$990,000 | \$990,000 |
| Reliability Upgrade | 1a | 59 | National Grid, USA | | 01/2012 | Auburn Reliability Transmission System Upgrades | G18, F19 line terminals 115kV upgrades at Bridgewater sub | Planned | Planned | 03/12/2002 | 1/31/2003 | \$400,000 | \$400,000 |
| Reliability Upgrade | 1a | 695 | NSTAR Electric Company | | 04/2009 | Short Term Lower SEMA Upgrades | Loop (355) 345 kV line in and out of Carver Substation and add (5) new 345 kV circuit breakers at Carver substation. | Planned | Under Construction | 08/17/2007 | No | \$10,800,000 | \$86.6 M (Total NSTAR Project Cost) |
| Reliability Upgrade | 1a | 830 | NSTAR Electric Company | | 04/2009 | Short Term Lower SEMA Upgrades | Add a second 345/115 kV Auto transformer at Carver substation and add (1) new 345 kV circuit breaker and (3) new 115 kV circuit breakers at Carver substation. | Planned | Under Construction | 08/17/2007 | No | \$8,000,000 | Part of Short Term Lower SEMA |
| Reliability Upgrade | 1a | 831 | NSTAR Electric Company | | 06/2009 | Short Term Lower SEMA Upgrades | Add a second 115 kV line from Carver to Tremont and add (2) new 115 kV circuit breakers at Carver substation and (1) new 115 kV circuit breaker at Tremont substation. | Planned | Under Construction | 08/17/2007 | No | \$2,500,000 | Part of Short Term Lower SEMA |
| Reliability Upgrade | 1a | 832 | NSTAR Electric Company | | 09/2009 | Short Term Lower SEMA Upgrades | Add(1) 115kV SVC (0-112 MVARs lagging) at Barnstable. | Planned | Under Construction | 08/17/2007 | No | \$16,000,000 | Part of Short Term Lower SEMA |
| Reliability Upgrade | 1a | 931 | National Grid, USA | | 06/2009 | Central/Western Massachusetts Upgrades | Park St. - incremental cost of designing for 115 kV instead of 69 kV. | Planned | Planned | 12/17/2007 | No | \$531,481 | \$531,481 |
| Reliability Upgrade | 1a | 930 | National Grid, USA | | 12/2009 | Central/Western Massachusetts Upgrades | Reconductor Nashua St - Quinsigamond Jct (O141) 115 kV line w/636 ACSS. | Planned | Planned | 12/17/2007 | No | \$1,765,000 | \$2,300,000 |
| Reliability Upgrade | 1a | 934 | National Grid, USA | | 12/2009 | Central/Western Massachusetts Upgrades | Reconductor #2 Tap from Tower 510 - Webster St. 115 kV circuit. | Planned | Planned | 12/17/2007 | No | \$818,480 | \$818,480 |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|--|--|--------------------|--------------------|----------------------|--------------|----------------------------|----------------------------|
| Reliability Upgrade | 1a | 933 | National Grid, USA | | 04/2010 | Central/Western Massachusetts Upgrades | Reconductor Pratts Jct - Flagg Pond I-135S & J-136S 115 kV lines w/795 ACSR. | Planned | Planned | 12/17/2007 | No | \$5,952,582 | \$6,137,112 |
| Reliability Upgrade | 1a | 938 | National Grid, USA | | 06/2010 | Central/Western Massachusetts Upgrades | Deerfield - install a new 115/69KV autotransformer and a 69KV breaker and disconnect switches. | Planned | Planned | 12/17/2007 | No | \$3,068,556 | \$3,068,556 |
| Reliability Upgrade | 1a | 942 | National Grid, USA | | 06/2010 | Central/Western Massachusetts Upgrades | Webster St. - add two 115 kV circuit breakers. | Planned | Planned | 12/17/2007 | No | \$2,767,180 | \$2,767,180 |
| Reliability Upgrade | 1a | 935 | National Grid, USA | | 07/2010 | Central/Western Massachusetts Upgrades | Reconductor from (A-127E/B-128E) Millbury - Tower 510 115 kV line. | Planned | Planned | 12/17/2007 | No | \$5,208,509 | \$5,208,509 |
| Reliability Upgrade | 1a | 927 | National Grid, USA | | 07/2010 | Central/Western Massachusetts Upgrades | Greendale - replace 115 kV breaker and upgrade to 2000A. | Planned | Planned | 12/17/2007 | No | \$584,629 | \$584,629 |
| Reliability Upgrade | 1a | 929 | National Grid, USA | | 12/2010 | Central/Western Massachusetts Upgrades | Searsburg - install in-line 69 kV breaker for operational flexibility. | Planned | Planned | 12/17/2007 | No | \$1,381,849 | \$1,381,849 |
| Reliability Upgrade | 1a | 936 | National Grid, USA | | 12/2010 | Central/Western Massachusetts Upgrades | Reconductor (P142/P142S) Rolfe Avenue - West Bolyston 115 kV line w/1590 ACSR. | Planned | Planned | 12/17/2007 | No | \$2,890,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 928 | National Grid, USA | | 12/2010 | Central/Western Massachusetts Upgrades | Millbury -upgrade terminal equipment for O-141, P-142, B-128, A-127 circuit breakers. | Planned | Planned | 12/17/2007 | No | \$1,945,218 | \$1,945,218 |
| Reliability Upgrade | 1a | 924 | National Grid, USA | | 12/2010 | Central/Western Massachusetts Upgrades | Replace five 115 kV-25 kA breakers with 115 kV-50 kA breakers and upgrade disconnect switch (175-3) to 2000A. | Planned | Planned | 12/17/2007 | No | \$2,147,181 | \$2,147,181 |
| Reliability Upgrade | 1a | 943 | National Grid, USA | | 01/2011 | Central/Western Massachusetts Upgrades | Millbury - new 115 kV breaker position for new line to Twr 510. | Planned | Planned | 12/17/2007 | No | \$1,073,995 | \$1,073,995 |
| Reliability Upgrade | 1a | 946 | National Grid, USA | | 03/2011 | Central/Western Massachusetts Upgrades | Convert 69 kV (O-15S) Palmer - E Longmeadow - Shaker Rd line to 115 kV. | Planned | Planned | 12/17/2007 | No | \$14,809,054 | \$9,604,032 |
| Reliability Upgrade | 1a | 947 | National Grid, USA | | 03/2011 | Central/Western Massachusetts Upgrades | Reconductor 115 kV line from Palmer to new Hampden Substation. | Planned | Planned | 12/17/2007 | No | \$14,170,733 | \$2,632,635 |
| Reliability Upgrade | 1a | 940 | National Grid, USA | | 04/2011 | Central/Western Massachusetts Upgrades | Reconductor sections of A127W line w/795 ACSR. | Planned | Planned | 12/17/2007 | No | \$6,235,744 | \$6,235,744 |
| Reliability Upgrade | 1a | 945 | National Grid, USA | | 06/2011 | Central/Western Massachusetts Upgrades | Adams - install third 115 kV breaker to complete ring bus. | Planned | Planned | 12/17/2007 | No | \$1,581,841 | \$1,581,841 |
| Reliability Upgrade | 1a | 948 | National Grid, USA | | 06/2011 | Central/Western Massachusetts Upgrades | Hampden - build new 115 kV substation at 1515/O-15S intersection (4 breaker ring). | Planned | Planned | 12/17/2007 | No | \$5,649,430 | \$5,649,430 |
| Reliability Upgrade | 1a | 949 | National Grid, USA | | 06/2011 | Central/Western Massachusetts Upgrades | Palmer - add 115 kV breaker position for O15S conversion, includes thermal upgrade of W-175 bay. | Planned | Planned | 12/17/2007 | No | \$1,694,829 | \$1,694,829 |
| Reliability Upgrade | 1a | 952 | National Grid, USA | | 06/2011 | Central/Western Massachusetts Upgrades | Reconductor E Winchendon - J136 Tap within I135/J136 ROW w/795 ACSR. | Planned | Planned | 12/17/2007 | No | \$932,156 | \$932,156 |
| Reliability Upgrade | 1a | 925 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - supply 13 kV from T3 and T4. | Planned | Planned | 12/17/2007 | No | \$318,888 | \$318,888 |
| Reliability Upgrade | 1a | 926 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - replace T8 autotransformer with 230 kV 333 mVA, upgrade breaker and bus to 115 kV. Install high side 230 kV breaker. | Planned | Planned | 12/17/2007 | No | \$4,889,621 | \$6,027,520 |
| Reliability Upgrade | 1a | 932 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - increase thermal rating of I-135 and J-136 buswork. | Planned | Planned | 12/17/2007 | No | \$372,036 | \$372,036 |
| Reliability Upgrade | 1a | 937 | National Grid, USA | | 10/2011 | Central/Western Massachusetts Upgrades | Bear Swamp - install one 230-115 kV 333 mVA auto, one 115 kV breaker and upgrade various terminal equipment. | Planned | Planned | 12/17/2007 | No | \$6,602,875 | \$6,602,875 |
| Reliability Upgrade | 1a | 955 | National Grid, USA | | 11/2011 | Central/Western Massachusetts Upgrades | Reconductor (W175) W Charlton - Little Rest - Palmer w/1590 ACSR. | Planned | Planned | 12/17/2007 | No | \$10,779,113 | \$10,779,113 |
| Reliability Upgrade | 1a | 939 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Reconductor and retension (E205W) Harriman - Bear Swamp Tap 230 kV circuit. | Planned | Planned | 12/17/2007 | No | \$3,287,738 | \$3,389,658 |
| Reliability Upgrade | 1a | 941 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Install new Millbury - Tower #510 115 kV line. | Planned | Planned | 12/17/2007 | No | \$5,753,542 | \$7,909,203 |
| Reliability Upgrade | 1a | 944 | National Grid, USA | | 12/2011 | Central/Western Massachusetts Upgrades | Wachusett - install one 345 kV, 448 mVA transformer, one 345 kV breaker, and one 115 kV breaker. | Planned | Planned | 12/17/2007 | No | \$9,898,000 | \$11,411,849 |
| Reliability Upgrade | 1a | 950 | National Grid, USA | | 02/2012 | Central/Western Massachusetts Upgrades | E Winchendon - install 115 kV breaker and 115 kV disconnect switch. | Planned | Planned | 12/17/2007 | No | \$899,312 | \$1,016,897 |
| Reliability Upgrade | 1a | 953 | National Grid, USA | | 02/2012 | Central/Western Massachusetts Upgrades | Otter River - expand substation into 6-breaker ring bus with four 115 kV breakers and install two transformers. | Planned | Planned | 12/17/2007 | No | \$9,444,260 | \$10,248,067 |
| Reliability Upgrade | 1a | 954 | National Grid, USA | | 02/2012 | Central/Western Massachusetts Upgrades | E Westminster - install new 115 kV breaker, including disconnect switches. Assumes no new control house. | Planned | Planned | 12/17/2007 | No | \$799,506 | \$903,909 |
| Reliability Upgrade | 1a | 951 | National Grid, USA | | 02/2013 | Central/Western Massachusetts Upgrades | Install new Otter River - E Winchendon 115 kV line. | Planned | Planned | 12/17/2007 | No | \$6,400,522 | \$7,455,440 |
| Reliability Upgrade | 1a | 1064 | NSTAR Electric Company | | 04/2009 | | Install (1) 345kV 160 MVAR shunt reactor at Mystic Station | Planned | Planned | 9/26/2008 | No | \$8,000,000 | \$10,400,000 |
| Reliability Upgrade | 1a | 166 | National Grid, USA | | 06/2009 | | Replace (16) 115 kV breakers at Tewksbury 22. | Under Construction | Under Construction | NR | NR | \$3,300,000 | \$3,300,000 |

Notes
 - Black shading indicates change from OCTOBER '08 Update.
 - All costs provided by Transmission Owners.

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---|---|--------------------|--------------------|----------------------|--------------|---|---|
| Reliability Upgrade | 1a | 162 | National Grid, USA | | 04/2010 | | Q-169 Golden Hills to Lynn 115 kV line upgrade. | Under Construction | Under Construction | 9/2/2005 | 4/25/2008 | \$12,390,000 | \$12,390,000 |
| Reliability Upgrade | 1a | 673 | National Grid, USA | | 07/2010 | Worcester Area Reinforcements | Bloomingtondale Substation - #27 install 115 kV breaker. | Concept | Planned | 2/27/2009 | No | \$2,200,000 | \$2,200,000 |
| Reliability Upgrade | 1a | 676 | National Grid, USA | | 03/2012 | Worcester Area Reinforcements | New Bloomingtondale to Vernon Hill 115 kV (UG Cable-3.6 mi.) | Concept | Planned | 2/27/2009 | No | \$30,000,000 | \$30,000,000 |
| Reliability Upgrade | 1a | 1000 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Separate and reconductor the 1311 and 1412 (West Springfield - Agawam) 115 kV double circuit. | Planned | Planned | 6/27/2008 | No | \$22,000,000 | \$22,000,000 |
| Reliability Upgrade | 1a | 1076 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1311) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 1077 | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1412) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 902 | National Grid, USA | | 03/2012 | Middleboro Municipal | Close the E1-M1 loop at Middleboro's Wareham St Sub. | Under Construction | Under Construction | 12/01/2006 | NR | \$715,000 | \$715,000 |
| Reliability Upgrade | 1a | 687 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Fairmont 16H Substation Expansion | Planned | Planned | 9/24/2008 | No | \$714,000,000 | \$714,000,000 |
| Reliability Upgrade | 1a | 826 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | South Agawam 42E Substation Reconfigure | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 196 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line (3216), Agawam (MA) - North Bloomfield (CT) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 818 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reconstruct a new 115kV line South Agawam to Southwick (1768) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 819 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line Ludlow - Agawam (3196) | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 820 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Expansion of Agawam 16C 115 kV Substation to include new 345 kV station with two 345/115-kV autotransformers. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 823 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Ludlow 19S 345 kV Substation Expansion, two 345/115kV Autotransformers replacements. Add two 345kV 120 MVAR Capacitor additions | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-------------------------|--------------------------|---------------------------------|---|---|---------------|----------------|----------------------|--------------|---|---|
| Reliability Upgrade | 1a | 828 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Breckwood 115kV circuit 1322 Reactor Bypass and Open Breckwood Substation IT breaker and maintain breaker in the normally open position | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 829 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Piper (1230) 115 kV line. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1010 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build 115-kV Cadwell switching 50F station. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 259 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to Orchard (1426) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 688 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Cadwell (1481) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1100 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Chicopee (1314) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1101 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Orchard (1552) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1102 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Piper (1601) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1103 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Chicopee (1602) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1104 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Cadwell (1603) 115kV line and add 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1105 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Shawinigan (1604) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1070 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1781) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1071 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1782) 115kV line and add a 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1072 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Shawinigan (1845) 115kV line and add 2nd High Speed Protection | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1073 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Retermine Cadwell to East Springfield (5001) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1074 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Retermine Cadwell to East Springfield (5002) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1075 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add 2nd high speed protection scheme to Agawam to Elm (1007) 115kV line if the Russell Biomass Plant, queue position #135 is constructed | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1078 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Pineshed (1327) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1079 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Mt. Tom (1428) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1080 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Replace 4T and 6T 115kV circuit breaker to Shawinigan substation | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Generator Interconnection Upgrade | 2a | 1045 | National Grid, USA | | 06/2010 | Lowell Power | Upgrade 137T and K-137W 115 kV circuit breakers at Sandy Pond. | Planned | Planned | 7/25/2006 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 505 | National Grid, USA | | 07/2010 | Hoosac Wind Farm | Tap Y-25S line between Harriman and Deerfield 5. Construct 69/34.5 kV substation and 34.5 kV line connecting 30 MW generating facility with the 69 kV system. | Planned | Planned | 02/01/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 595 | NSTAR Electric Company | | 11/2010 | Cape Wind | Expansion of Barnstable 115 kV substation to include 5th bay and (2) circuit breakers, addition of a 3rd breaker in the planned 4th bay, and (2) 35MVAR shunt reactors. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 596 | NSTAR Electric Company | | 11/2010 | Cape Wind | Installation of (2) 115 kV circuits out of Barnstable substation to interconnect Cape Wind. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 598 | NSTAR Electric Company | | 11/2010 | Cape Wind | At Canal 345 kV substation, install a redundant breaker in series with breaker #312. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 599 | NSTAR Electric Company | | 11/2010 | Cape Wind | Upgrade the Bourne 115 kV breaker #12272 with an IPT breaker. | Planned | Planned | 10/6/2005 | NR | NR | NR |

Notes
- Black shading indicates change from OCTOBER '08 Update.
- All costs provided by Transmission Owners.

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-------------------------|--------------------------|---------------------------------|--------------------|---|---------------|----------------|----------------------|--------------|----------------------------|----------------------------|
| Generator Interconnection Upgrade | 2a | 600 | NSTAR Electric Company | | 11/2010 | Cape Wind | Installation of differential insulation and additional grounding at each tower that is common for the 342 and 322 345 kV lines. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1048 | NSTAR Electric Company | | 11/2010 | Cape Wind | Convert Canal 345 kV SPS to include tripping of Cape Wind for the simultaneous loss of 342 and 322 345 kV lines. | Planned | Planned | 10/6/2005 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1046 | National Grid, USA | | 06/2011 | Queue Position 178 | Reconductor 115 kV F19 Line (Auburn - Brockton Tap). | Proposed | Proposed | 3/10/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1047 | National Grid, USA | | 06/2011 | Queue Position 178 | Replace Bridgewater 115 kV 1631 circuit breaker with 63 kA breaker. | Proposed | Proposed | 3/10/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 622 | Northeast Utilities | | 06/2011 | Queue Position 135 | Interconnection to WMECO's 115-kV 1512 line through a new Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1043 | Northeast Utilities | | 06/2011 | Queue Position 135 | Upgrade the 1768 line terminal equipment at Southwick Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1044 | Northeast Utilities | | 06/2011 | Queue Position 135 | Upgrade the 1512 line terminal equipment at Southwick Substation. | Proposed | Proposed | 06/01/2007 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1058 | National Grid, USA | | 06/2011 | Billerica Power | Interconnection to Tewksbury 115 kV Substation via O-193 Line and refurbish section of J-162 line. | Planned | Planned | 7/8/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1059 | National Grid, USA | | 06/2011 | Billerica Power | Re-terminate line tap section (Perry Street) of J-162 Line to new bay position at Tewksbury. | Planned | Planned | 7/8/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1060 | National Grid, USA | | 06/2011 | Billerica Power | Reconductor 2.8 mi. of the M-139 115 kV line. | Planned | Planned | 7/8/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1061 | National Grid, USA | | 06/2011 | Billerica Power | Replace (16) 115 kV circuit breakers at Tewksbury 22 w/ IPT capability if all generators w/ higher Queue Position are constructed. The quantity of breaker upgrades subject to Queued generators constructed. | Planned | Planned | 7/8/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1062 | National Grid, USA | | 06/2011 | Billerica Power | Upgrade #137T and #K-137W 115 kV circuit breakers at Sandy Pond (if not completed as part of Merrimack Valley/North Shore Project). | Planned | Planned | 7/8/2008 | NR | NR | NR |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|---------------------|-------|------------|-------------------------------------|--------------------------|---------------------------------|---|---|---------------|----------------|----------------------|--------------|----------------------------|----------------------------|
| Elective | 4a | 1057 | Braintree Electric Light Department | | 06/2010 | | Upgrade 115-10-16 underground 115 kV cable. | Planned | Planned | 4/17/2008 | No | TBD | TBD |
| RHODE ISLAND | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 484 | National Grid, USA | | 01/2010 | Greater Rhode Island Transmission Reinforcements 1 | Add (1) new 115 kV breaker at Woonsocket. | Planned | Planned | 4/25/2008 | No | \$690,000 | \$690,000 |
| Reliability Upgrade | 1a | 792 | National Grid, USA | | 01/2011 | Greater Rhode Island Transmission Reinforcements 1 | Admiral St-Franklin Square (Q143 and R144) 115 kV UG recabling. | Planned | Planned | 4/25/2008 | No | \$22,500,000 | \$39,200,000 |
| Reliability Upgrade | 1a | 913 | National Grid, USA | | 02/2011 | Greater Rhode Island Transmission Reinforcements 1 | Brayton Point substation reinforcements to accommodate the new 115 kV line. | Planned | Planned | 4/25/2008 | No | \$3,250,000 | \$3,250,000 |
| Reliability Upgrade | 1a | 793 | National Grid, USA | | 02/2011 | Greater Rhode Island Transmission Reinforcements 1 | Somerset substation reinforcements. | Planned | Planned | 4/25/2008 | No | \$6,400,000 | \$6,400,000 |
| Reliability Upgrade | 1a | 791 | National Grid, USA | | 06/2011 | Greater Rhode Island Transmission Reinforcements 1 | New 115 kV circuit between Somerset and Brayton Point. | Planned | Planned | 4/25/2008 | No | \$11,560,000 | \$11,560,000 |
| Reliability Upgrade | 1a | 914 | National Grid, USA | | 01/2014 | Greater Rhode Island Transmission Reinforcements 1 | New third circuit between Somerset and Bell Rock. | Planned | Planned | 4/25/2008 | No | \$28,150,000 | \$28,150,000 |
| Reliability Upgrade | 1a | 915 | National Grid, USA | | 01/2014 | Greater Rhode Island Transmission Reinforcements 1 | Reconductor M13 and L14 between Bell Rock and Dexter + Reconductor 69 kV lines 61 and 62. | Planned | Planned | 4/25/2008 | No | \$19,450,000 | \$19,450,000 |
| Reliability Upgrade | 1a | 916 | National Grid, USA | | 01/2014 | Greater Rhode Island Transmission Reinforcements 1 | Conversion of Jepson 69 kV substation to 115 kV substation. | Planned | Planned | 4/25/2008 | No | \$11,800,000 | \$11,800,000 |
| Reliability Upgrade | 1a | 917 | National Grid, USA | | 01/2014 | Greater Rhode Island Transmission Reinforcements 1 | Bell Rock substation expansion. | Planned | Planned | 4/25/2008 | No | \$7,000,000 | \$7,000,000 |
| Reliability Upgrade | 1a | 918 | National Grid, USA | | 01/2014 | Greater Rhode Island Transmission Reinforcements 1 | Dexter substation changes. | Planned | Planned | 4/25/2008 | No | \$3,180,000 | \$3,180,000 |
| Reliability Upgrade | 1a | 786 | National Grid, USA | | 06/2009 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Terminal upgrades at Drumrock, Chartley Pond, and Brayton Point. | Planned | Planned | 4/25/2008 | No | \$565,000 | \$565,000 |
| Reliability Upgrade | 1a | 789 | National Grid, USA | | 11/2009 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Reconductoring of T7 115 kV line. | Planned | Planned | 4/25/2008 | No | \$20,900,000 | \$23,304,000 |
| Reliability Upgrade | 1a | 787 | National Grid, USA | | 12/2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | West Farnum breaker replacements. | Planned | Planned | 4/25/2008 | No | \$7,600,000 | \$7,631,000 |
| Reliability Upgrade | 1a | 788 | National Grid, USA | | 12/2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Kent County substation expansion. | Planned | Planned | 4/25/2008 | No | \$42,300,000 | \$42,300,000 |
| Reliability Upgrade | 1a | 790 | National Grid, USA | | 10/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Berry Street 345/115 kV substation. | Planned | Planned | 4/25/2008 | No | \$50,600,000 | \$50,600,000 |
| Reliability Upgrade | 1a | 1098 | National Grid, USA | | 10/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | 345/115kV line interconnections at Berry Street | Planned | Planned | 4/25/2008 | No | \$23,000,000 | \$37,529,000 |
| Reliability Upgrade | 1a | 1094 | National Grid, USA | | 06/2012 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV Millbury Substation equipment | Planned | Planned | 9/24/2008 | No | \$20,800,000 | \$20,800,000 |
| Reliability Upgrade | 1a | 1095 | National Grid, USA | | 06/2012 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV West Farnum Substation Equipment | Planned | Planned | 9/24/2008 | No | \$73,800,000 | \$73,800,000 |
| Reliability Upgrade | 1a | 795 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | New Kent County to West Farnum 345kV line. | Planned | Planned | 9/24/2008 | No | \$99,900,000 | \$99,900,000 |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|---------------------|-------|------------|-----------------------------|--------------------------|---------------------------------|--|---|--------------------|--------------------|----------------------|--------------|----------------------------|----------------------------|
| Reliability Upgrade | 1a | 1106 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Installation of third 345/115kV autotransformer at Kent County. | Planned | Planned | 9/24/2008 | No | Part of \$99,900,000 above | Part of \$99,900,000 above |
| Reliability Upgrade | 1a | 798 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | E-183E upgrade of 115kV terminal equipment at Franklin Square. | Planned | Planned | 9/24/2008 | No | \$4,900,000 | \$4,900,000 |
| Reliability Upgrade | 1a | 799 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | G-185N (Kent County-Drumrock) 115 kV reconductor. | Planned | Planned | 9/24/2008 | No | \$4,500,000 | \$4,500,000 |
| Reliability Upgrade | 1a | 1096 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Drumrock substation: Terminal equipment upgrades, Protection modifications and upgrades to meet BPS standards | Planned | Planned | 9/24/2008 | No | \$5,800,000 | \$5,800,000 |
| Reliability Upgrade | 1a | 800 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Reconductoring of short segments of S-171S, T-172N and T-172S with associated terminal equipment upgrades. | Planned | Planned | 9/24/2008 | No | \$7,300,000 | \$7,300,000 |
| Reliability Upgrade | 1a | 1097 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Relocate and Rebuild 115kV lines in the same ROW associated with new 345kV line from W. Farnum to Kent County | Planned | Planned | 9/24/2008 | No | \$129,800,000 | \$129,800,000 |
| Reliability Upgrade | 1a | 1099 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | Hartford Ave 115kV terminal equipment upgrades | Planned | Planned | 9/24/2008 | No | \$4,100,000 | \$4,100,000 |
| Reliability Upgrade | 1a | 1109 | National Grid, USA | | 06/2012 | NEEWS (Rhode Island Reliability Project) | South Wrentham 115kV terminal equipment upgrades | Planned | Planned | 9/24/2008 | No | \$360,000 | \$360,000 |
| Reliability Upgrade | 1a | 796 | National Grid, USA | | 11/2012 | NEEWS (Interstate Reliability Project) | 347 Reconductor from Sherman Road to CT/RI Border. | Planned | Planned | 9/24/2008 | No | \$16,400,000 | \$16,400,000 |
| Reliability Upgrade | 1a | 797 | National Grid, USA | | 12/2012 | NEEWS (Interstate Reliability Project) | 3361 Upgrade 345kV terminal equipment at Sherman Road. | Planned | Planned | 9/24/2008 | No | \$8,300,000 | \$8,300,000 |
| Reliability Upgrade | 1a | 190 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | New Millbury to West Farnum (366) 345kV line. | Planned | Planned | 9/24/2008 | No | \$69,600,000 | \$69,600,000 |
| Reliability Upgrade | 1a | 794 | National Grid, USA | | 12/2013 | NEEWS (Interstate Reliability Project) | New West Farnum to Connecticut/Rhode Island border (341) 345kV line (to Lake Road). | Planned | Planned | 9/24/2008 | No | \$55,800,000 | \$55,800,000 |
| CONNECTICUT | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 1009 | Northeast Utilities | | 05/2009 | | Install a 2% reactor on the North Bloomfield-Canton 115kV line. | Under Construction | Under Construction | 10/20/2007 | No | \$2,075,000 | \$3,638,000 |
| Reliability Upgrade | 1a | 203 | Northeast Utilities | | 05/2009 | NU LSP - Stepstone Substation | Install new Stepstone 115 kV substation in Guilford. | Under Construction | Under Construction | 11/8/2005 | 4/24/2006 | \$4,465,000 | \$6,332,000 |
| Reliability Upgrade | 1a | 211 | Northeast Utilities | | 10/2009 | NU LSP - Rood Ave Substation | New Rood Ave (formally Windsor) distribution substation with 115kV terminal modifications. | Under Construction | Under Construction | 4/25/2008 | 02/15/2008 | \$9,162,029 | \$9,162,029 |
| Reliability Upgrade | 1a | 1110 | United Illuminating Company | | 06/2010 | | Broadway 115/13.8 kV Substation Addition | Proposed | Planned | 12/8/2008 | NR | \$1,000,000 | \$800,000 |
| Reliability Upgrade | 1a | 1111 | United Illuminating Company | | 09/2010 | | Metro North Union Avenue 115/26.4 kV Substation | Proposed | Planned | 1/7/2009 | No | \$8,700,000 | \$8,700,000 |
| Reliability Upgrade | 1a | 1049 | United Illuminating Company | | 12/2010 | | East Shore 115 kV Capacitor Bank Transient Recovery | Planned | Planned | NR | NR | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 582 | Northeast Utilities | | 12/2010 | | Separate 310 and 368 345-KV lines and create 368/1767 DCT | Planned | Planned | 7/18/2008 | No | \$16,000,000 | \$16,000,000 |
| Reliability Upgrade | 1a | 1050 | United Illuminating Company | | 12/2010 | | Devon Tie 115kV Switching Station BPS Compliance | Concept | Planned | NR | NR | \$2,620,000 | \$2,620,000 |
| Reliability Upgrade | 1a | 1112 | United Illuminating Company | | 12/2010 | | Water Street 115kV circuit breaker and switch replacements. | Planned | Planned | NR | NR | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 1056 | Northeast Utilities | | 12/2011 | CT LSP - Sherwood Substation | Sherwood Substation - add a 115/13.8-kV substation with two transformers and a 115-kV circuit breaker. | Concept | Planned | 12/12/2008 | No | TBD | \$9,751,000 |
| Reliability Upgrade | 1a | 974 | United Illuminating Company | | 12/2011 | | East Shore 115 kV Oil Circuit Breaker & Disconnect Replacements. | Planned | Planned | NR | No | \$6,700,000 | \$6,700,000 |
| Reliability Upgrade | 1a | 976 | United Illuminating Company | | 05/2012 | | Grand Avenue 115 kV Switching Station Rebuild. | Proposed | Planned | 1/7/2009 | No | \$48,000,000 | \$48,000,000 |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-------------------------|--|---------------------------------|---|--|---------------|----------------|----------------------|--------------|---|---|
| Reliability Upgrade | 1a | 816 | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | North Bloomfield 2A Substation Expansion - add a second 345/115-kV autotransformer | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1054 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Greater Springfield Reliability Project) | Manchester - Meekville Jct. line (395/1448) separation. | Planned | Planned | 9/24/2008 | No | \$14,000,000 | \$14,000,000 |
| Reliability Upgrade | 1a | 576 | Northeast Utilities | | 12/2013 | NEEWS (Central Connecticut Reliability Project) | Build new 345kV line (3208) North Bloomfield to Frost Bridge. | Planned | Planned | 9/24/2008 | No | \$313,000,000 | \$313,000,000 |
| Reliability Upgrade | 1a | 1114 | Northeast Utilities | | 12/2013 | NEEWS (Central Connecticut Reliability Project) | Frost Bridge 18R substation expansion - add a 345/115kV autotransformer. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Central Connecticut Reliability Project) | Part of NEEWS (Central Connecticut Reliability Project) |
| Reliability Upgrade | 1a | 814 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Central Connecticut Reliability Project) | Reconductor a portion of the Manchester to Scovill Rock 353 345-kV line and terminal work. | Planned | Planned | 9/24/2008 | No | \$9,000,000 | \$9,000,000 |
| Reliability Upgrade | 1a | 802 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Build new 345kV line (3271) Card to Lake Road | Planned | Planned | 9/24/2008 | No | \$251,000,000 | \$251,000,000 |
| Reliability Upgrade | 1a | 1084 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Loop the Millstone - Manchester (310) 345 kV line into the Card substation. | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1085 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Card 11F substation expansion | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1086 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to 115kV line 1704, SW Hartford to South Meadow | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1087 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to line 115kV 1722 SW Hartford NW Hartford | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1088 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to 115kV line 1786, East Hartford to Riverside to South Meadow | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1089 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Killingly 3G substation 345kV breaker addition | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1090 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Millstone 15G substation breaker 14T upgrade 50kA | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1091 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Southington 4C substation breaker 19T upgrade to 63kA | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 810 | Northeast Utilities | | 12/2013 | NEEWS (Interstate Reliability Project) | Lake Road 27E 345 kV substation expansion | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 191 | Northeast Utilities | National Grid, USA | 12/2013 | NEEWS (Interstate Reliability Project) | Build Lake Road to Connecticut/Rhode Island border (341) 345-kV line (to West Farnum). | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 807 | Northeast Utilities | | 12/2013 | NEEWS (Ancillary Interstate Reliability Project) | Install 480 MVAR's of capacitors at the Montville 345 kV substation | Planned | Planned | 9/24/2008 | No | \$33,000,000 | \$33,000,000 |
| Reliability Upgrade | 1a | 1092 | Northeast Utilities | | 12/2013 | NEEWS (BPS) ² | Upgrade the Card 115 kV, East Hartford 115 kV, Agawam 115 kV, Barbour Hill 115 kV, and North Bloomfield 345 kV Substations to BPS standards. | Planned | Planned | 9/24/2008 | No | \$37,000,000 | \$37,000,000 |
| Reliability Upgrade | 1a | 879 | | Bangor Hydro-Electric Company, New England Power Company, Northeast Utilities System Com | TBD | Dynamic Swing Reorder Project | Upgrade 7 of 8 Dynamic Swing Recorders in New England to comply with NERC, NPCC, and ISO-NE Standards. | Planned | Planned | 03/01/2007 | NR | \$420,000 | \$420,000 |
| Generator Interconnection Upgrade | 2a | 983 | Northeast Utilities | | 10/2010 | Queue Position 207 | Rebuild 115 kV 1585N Line between new substation and Bunker Hill. | Proposed | Proposed | 9/26/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1107 | Northeast Utilities | | 10/2010 | Queue Position 207 | Interconnection to new 115 kV substation consisting of (14) circuit breakers in a breaker and a half configuration that sectionalizes the existing 1575, 1585, and 1990 lines. | Proposed | Proposed | 9/26/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1108 | Northeast Utilities | | 10/2010 | Queue Position 207 | Installation of a 2.5% series reactor on the 1990S Line at the new substation. | Proposed | Proposed | 9/26/2008 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 331 | Northeast Utilities | | 11/2010 | Kleen Energy | Install 5-breaker ring bus interconnecting between Scovill Rock and Manchester on the 345 kV 353 Line. | Planned | Planned | 10/08/2003 | NR | NR | NR |
| Generator Interconnection Upgrade | 2a | 1121 | Northeast Utilities | | 06/2010 | Queue Position 161-2 | Four units connected to 384 line through a new 345kV Substation: unit #4 will also connect to Substation | | Proposed | 12/8/2008 | NR | | NR |
| Generator Interconnection Upgrade | 2a | 1122 | Northeast Utilities | | 11/2010 | Queue Position 191 | One turbine connected to #1238 Line (Frost Bridge to Carmel) via a new 3-breaker ring bus Substation | | Proposed | 2/24/2009 | NR | | NR |
| Generator Interconnection Upgrade | 2a | 1126 | Northeast Utilities | | TBD | Queue Position 161-4 | Two units and repowering of #6 Montville 345kV Substation | | Proposed | 6/9/2008 | NR | | NR |

Notes
 - Black shading indicates change from OCTOBER '08 Update.
 - All costs provided by Transmission Owners.

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|--------------------------------|--------------------------|---------------------------------|---|---|---------------|----------------|----------------------|--------------|---|----------------------------|
| TABLE B | | | | | | | | | | | | | |
| MAINE | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 1130 | Central Maine Power Company | | 12/2009 | Sturtevant Improvements | Add 115kV circuit breakers & capacitor bank at Sturtevant Substation | | Proposed | No | No | | \$2,000,000 |
| Reliability Upgrade | 1b | 148 | Central Maine Power Company | | 06/2010 | CMP LSP - Saco Bay Area Reinforcement Project | Establish a new Old Orchard Beach 115/34.5 kV substation and 115 kV line. | Concept | Proposed | No | No | \$16,900,000 | \$16,900,000 |
| Reliability Upgrade | 1b | 1133 | Central Maine Power Company | | 10/2010 | CMP-LSP Leeds Substation | Add 115/34kV Leeds Substation & new 34kV line from Leeds to Turner | | Proposed | No | No | | \$300,000 |
| Reliability Upgrade | 1b | 1116 | Bangor Hydro-Electric Company | | 12/2011 | Maine Power Reliability Program (MPRP) | L 64 Rebuild | | Concept | No | No | | TBD |
| Reliability Upgrade | 1b | 1031 | Bangor Hydro-Electric Company | | 01/2012 | Maine Power Reliability Program (MPRP) | Rebel Hill Switching Station, Rebuild Line 66, and Capacitor Bank Additions (10MVar at Treneton, Downeast & Hancock County area) | Proposed | Concept | No | No | Part of Maine Power Reliability Program | TBD |
| Reliability Upgrade | 1b | 1131 | Central Maine Power Company | | 12/2011 | CMP-LSP Bowman St. Substation | Add 115/34kV transformer | | Proposed | No | No | | \$600,000 |
| Reliability Upgrade | 1b | 1132 | Central Maine Power Company | | 12/2011 | CMP-LSP Maxcy's Substation | Add 115/34kV transformer (coordinate with MPRP) | | Proposed | No | No | | \$600,000 |
| Elective | 4b | 1018 | Bangor Hydro-Electric Company | | TBD | Orrington-Boston HVDC | Orrington substation reconfiguration and addition of new HVDC cable system terminating in Boston area. | Concept | Concept | No | No | TBD | TBD |
| Elective | 4b | 984 | Central Maine Power Company | Maine Public Service | TBD | MEPCO-MPS 345 kV Interconnection | MEPCO-MPS 345 kV Interconnection. | Concept | Concept | No | No | TBD | TBD |
| NEW HAMPSHIRE | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 275 | Northeast Utilities | | TBD | | Merrimack 115-kV substation - Protection Separation Upgrade. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 277 | Northeast Utilities | | TBD | | Add 2nd 345 kV autotransformer at Deerfield and associated substation work | Concept | Concept | No | No | TBD | TBD |
| Generator Interconnection Upgrade | 2b | 869 | Northeast Utilities | | 06/2013 | Queue Position 165 | Rebuild 345 kV 326 Line | Concept | Concept | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 1041 | Northeast Utilities | | 06/2013 | Queue Position 165 | Rebuild 115 kV U181 Line | Concept | Concept | No | NR | NR | NR |
| VERMONT | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 318 | Vermont Electric Power Company | | 12/2011 | | Rebuild the existing Georgia substation 115 kV bus into a ring bus to address reliability problems through the 1,250 MW Vermont state load level. | Concept | Concept | No | No | \$9,000,000 | \$9,000,000 |
| Reliability Upgrade | 1b | 325 | Vermont Electric Power Company | | 12/2011 | VELCO LSP - Chelsea Substation | Replace (2) SCADA controlled motorized disconnect switches with 115 kV circuit breakers at the existing Chelsea substation to maintain adequate supply to the load. | Concept | Concept | No | No | \$5,000,000 | \$5,000,000 |
| Reliability Upgrade | 1b | 324 | Vermont Electric Power Company | | 12/2012 | | Granite to Middlesex 230-kV line with necessary substation upgrades to mitigate several reliability concerns, including those related to the potential Highgate contract termination. | Concept | Concept | No | No | \$100,000,000 | \$100,000,000 |

Notes
 - Black shading indicates change from OCTOBER '08 Update.
 - All costs provided by Transmission Owners.

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|----------------------|-------|------------|-------------------------|--------------------------|---------------------------------|--|--|---------------|----------------|----------------------|--------------|----------------------------|------------------------------|
| MASSACHUSETTS | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 1063 | NSTAR Electric Company | | 12/2009 | | Install (2) 115kV 40 MVAR shunt reactors at Edgar Station | Concept | Proposed | No | No | TBD | \$5,400,000 |
| Reliability Upgrade | 1b | 963 | NSTAR Electric Company | | 12/2009 | Boston Area 115 kV Enhancements | Add a new 115kV breaker # 11 at Holbrook. | Concept | Proposed | No | No | TBD | \$3,400,000 |
| Reliability Upgrade | 1b | 842 | NSTAR Electric Company | | 06/2010 | Boston Area 115 kV Enhancements | Add 115 kV 54 MVAR capacitor bank at W. Framingham. | Concept | Proposed | No | No | TBD | \$3,000,000 |
| Reliability Upgrade | 1b | 964 | NSTAR Electric Company | | 12/2011 | Boston Area 115 kV Enhancements | Add a new series breaker # 8 at W. Walpole. | Concept | Proposed | No | No | TBD | \$5,600,000 |
| Reliability Upgrade | 1b | 965 | NSTAR Electric Company | | 12/2012 | Boston Area 115 kV Enhancements | Add third 115kV line from Walpole to Holbrook | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 969 | NSTAR Electric Company | | 12/2012 | Boston Area 115 kV Enhancements | Add a new 54 MVAR capacitor bank at Chelsea. | Concept | Concept | No | No | \$1,200,000 | \$1,200,000 |
| Reliability Upgrade | 1b | 301 | NSTAR Electric Company | | 12/2012 | Boston Area 115 kV Enhancements | Reconductor 115-kV circuits 320-507 and 320-508. | Concept | Concept | No | No | \$4,600,000 | \$4,600,000 |
| Reliability Upgrade | 1b | 843 | NSTAR Electric Company | | 12/2013 | Boston Area 115 kV Enhancements | Install (2) new 115 kV breakers at Trapelo Road. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 1119 | NSTAR Electric Company | | 12/2009 | Greater Boston Reliability Project | Remove limiting ground clearance conditions on West Medway-West Walpole 345kV line (#325) | | Proposed | No | No | | \$1,300,000 |
| Reliability Upgrade | 1b | 970 | NSTAR Electric Company | | 12/2012 | Greater Boston Reliability Project | Add a new 345 kV line from Lexington to Waltham. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 971 | NSTAR Electric Company | | 12/2012 | Greater Boston Reliability Project | Add a new 345/230 kV auto at Waltham and 230 kV switching facilities. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 1113 | NSTAR Electric Company | | 06/2010 | | Install KSt Breaker #301 | Concept | Proposed | No | No | TBD | \$2,100,000 |
| Reliability Upgrade | 1b | 1120 | NSTAR Electric Company | | 06/2010 | | Install 345kV 160 MVAR shunt reactor at W. Walpole | | Proposed | No | No | | \$6,000,000 |
| Reliability Upgrade | 1b | 1067 | NSTAR Electric Company | | 12/2010 | NPCC BPS Compliance | Tremont Station | Proposed | Proposed | No | No | \$7,100,000 | \$11,200,000 |
| Reliability Upgrade | 1b | 1066 | NSTAR Electric Company | | 09/2011 | NPCC BPS Compliance | Needham Station | Proposed | Proposed | No | No | \$7,500,000 | \$9,300,000 |
| Reliability Upgrade | 1b | 1065 | NSTAR Electric Company | | 07/2012 | NPCC BPS Compliance | Waltham Station | Proposed | Proposed | No | No | \$22,000,000 | \$24,300,000 |
| Reliability Upgrade | 1b | 783 | National Grid, USA | | 12/2010 | Merrimack Valley/North Shore Reliability Project | Extend the 115kV by addition of 115kV Breaker and K-153 line from King St. to W. Amesbury 115kV station. (W. Amesbury 345/115kV Station becomes PTF) | Concept | Concept | 4/1/2008 | No | \$30,349,000 | \$30,349,000 |
| Reliability Upgrade | 1b | 785 | National Grid, USA | | 07/2017 | Merrimack Valley/North Shore Reliability Project | Re-conductor F-158N (Golden Hills-Maplewood-Everett) 115 kV line. | Concept | Concept | No | No | \$1,330,000 | \$1,330,000 |
| Reliability Upgrade | 1b | 1068 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Install a new 345kV line from Carver to Sandwich and a a 345-115kV auto-transformer at Sandwich | Concept | Proposed | No | No | TBD | \$110,000,000 |
| Reliability Upgrade | 1b | 593 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Add a new 115 kV line from Canal to Barnstable. | Concept | Proposed | No | No | TBD | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1b | 592 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Separate existing 345kV double circuit Cape Cod Canal crossing | Concept | Proposed | No | No | TBD | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1b | 1117 | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Install 115kV 50 MVAR capacitor bank at Falmouth | Concept | Proposed | No | No | TBD | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1b | 1118 | NSTAR Electric Company | National Grid, USA | 12/2012 | Long Term Lower SEMA Upgrades | Upgrade 115kV line D21 and 111 | Concept | Proposed | No | No | TBD | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1b | 956 | National Grid, USA | | 05/2013 | Central/Western Massachusetts Upgrades | Carpenter Hill - replace one 345 kV, 448 MVA autotransformer and upgrade thermal rating of bus to at least 580 MVA. | Concept | Concept | No | No | \$7,021,534 | \$7,021,534 |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|-----------------------------|--------------------------|---------------------------------|---------------------------------|--|---------------|----------------|----------------------|--------------|----------------------------|----------------------------|
| Reliability Upgrade | 1b | 824 | Northeast Utilities | | TBD | Pittsfield / Greenfield Project | Reconductor the Woodland to Pleasant 1371 115-kV line and terminal work at Woodland substation. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 825 | Northeast Utilities | | TBD | Pittsfield / Greenfield Project | Upgrade the Pleasant to Blanford 115-kV line and the Blanford to Granville Jct. portion of the 115-kV line 1512. | Concept | Concept | No | No | TBD | TBD |
| Generator Interconnection Upgrade | 2b | 861 | Northeast Utilities | | 01/2010 | Queue Position 190 | Mount Tom - W Mass. Mt. Tom 115 kV Substation. | Concept | Concept | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 863 | Northeast Utilities | | 06/2010 | Queue Position 217 | Northfield Mountain - W. Mass Northfield 345 kV substation. | Proposed | Proposed | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 1014 | Northeast Utilities | | 06/2010 | Queue Position 196 | 345 kV Northfield Substation | Concept | Concept | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 880 | National Grid, USA | Northeast Utilities | 06/2011 | Queue Position 177 | Sutton Energy - 345 kV Carpenter Hill-Millbury Line. | Concept | Concept | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 1042 | National Grid, USA | | 06/2013 | Queue Position 165 | Replace (2) 345 kV circuit breakers at Sandy Pond | Concept | Concept | No | NR | NR | NR |
| Generator Interconnection Upgrade | 2b | 1123 | Northeast Utilities | | TBD | Queue Position 236 | New Substation on 1302 Line; terminal upgrades at Buck Pond and Agawam | | Concept | No | NR | | NR |
| RHODE ISLAND | | | | | | | | | | | | | |
| Generator Interconnection Upgrade | 2b | 881 | National Grid, USA | Northeast Utilities | 06/2012 | Queue Position 201 | RISEP - 345 kV RISE Substation. | Concept | Concept | No | NR | NR | NR |
| CONNECTICUT | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 809 | Northeast Utilities | | 12/2009 | | Upgrade terminal equipment at Bunker Hill 115 kV substation. | Proposed | Proposed | No | No | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1b | 1055 | Northeast Utilities | | 2010 | CT LSP - Waterside Substation | Waterside Substation - add a 115/13.2-kV transformer and a 115-kV circuit breaker. | Concept | Concept | No | No | \$4,107,000 | \$4,107,000 |
| Reliability Upgrade | 1b | 721 | United Illuminating Company | | 06/2011 | | New Shelton 115/13.8 kV substation | Proposed | Proposed | No | No | \$11,300,000 | \$11,300,000 |
| Reliability Upgrade | 1b | 316 | United Illuminating Company | | 06/2012 | | New Fairfield 115/13.8 kV substation | Concept | Concept | No | No | \$7,450,000 | \$7,450,000 |
| Reliability Upgrade | 1b | 699 | United Illuminating Company | | 12/2012 | | Naugatuck Valley 115 kV reliability improvement. | Concept | Concept | No | No | \$46,540,000 | \$10,000,000 |
| Reliability Upgrade | 1b | 977 | United Illuminating Company | | 06/2013 | | New Orange 115/13.8 kV substation | Concept | Concept | No | No | \$7,550,000 | \$7,550,000 |
| Reliability Upgrade | 1b | 975 | United Illuminating Company | | 12/2013 | | Pequonnock 115 kV Fault Duty Mitigation. | Concept | Concept | No | No | \$44,300,000 | \$44,300,000 |
| Reliability Upgrade | 1b | 980 | United Illuminating Company | | 06/2014 | | New Hamden 115/13.8 kV substation. | Concept | Concept | No | No | \$7,750,000 | \$7,750,000 |
| Reliability Upgrade | 1b | 317 | United Illuminating Company | | 06/2014 | | New North Branford 115/13.8-kV substation. | Concept | Concept | No | No | \$7,750,000 | \$7,750,000 |
| Reliability Upgrade | 1b | 801 | Northeast Utilities | | TBD | | Build Manchester to East Hartford 115-kV cable with a series reactor. | Concept | Concept | No | No | TBD | TBD |
| Reliability Upgrade | 1b | 85 | Northeast Utilities | | TBD | | Upgrade the South Meadow Substation to Bulk Power System standards (BPS). | Concept | Concept | 08/04/2004 | No | TBD | TBD |
| Generator Interconnection Upgrade | 2b | 1124 | Northeast Utilities | | TBD | Queue Position 222 | New Substation on Haddam Neck-Southington 345kV line | | Proposed | No | NR | | NR |
| Generator Interconnection Upgrade | 2b | 1125 | Northeast Utilities | | TBD | Queue Position 240 | 345kV on Montville Substation | | Concept | No | NR | | NR |

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|----------------------------|-------|------------|-----------------------------|--------------------------|---------------------------------|--|---|--------------------|----------------|----------------------|--------------|--|--|
| IN-SERVICE PROJECTS | | | | | | | | | | | | | |
| Reliability Upgrade | 1a | 155 | Central Maine Power Company | Northeast Utilities | 01/2009 | Maguire Road Project | Rebuild Three Rivers - Quaker Hill 115 kV Line K197. | Under Construction | In-Service | 03/01/2007 | 1/9/2009 | \$5,500,000 | \$5,500,000 |
| Reliability Upgrade | 1a | 910 | Central Maine Power Company | | 12/2008 | Rumford-Woodstock-Kimball Road Corridor Project | Rebuild Section 211 Woodstock - Rumford. | Under Construction | In-Service | 11/30/2007 | No | \$6,800,000 | \$8,400,000 |
| Reliability Upgrade | 1a | 923 | National Grid, USA | | 12/2008 | Auburn Area Transmission System Upgrades | Reconductor 115 kV A94 line and associated substation upgrades. | Planned | In-Service | 1/28/2008 | No | \$3,400,000 | \$2,400,000 |
| Reliability Upgrade | 1a | 922 | National Grid, USA | | 02/2009 | Auburn Area Transmission System Upgrades | Reconductor 115kV L1 line and associated substation upgrades. | Planned | In-Service | 1/28/2008 | No | \$1,050,000 | \$800,000 |
| Reliability Upgrade | 1a | 781 | National Grid, USA | | 10/2008 | Merrimack Valley/North Shore Reliability Project | Install 115 kV 30 MVAR capacitor bank at Revere. | Planned | In-Service | 4/1/2008 | No | \$1,500,000 | \$1,727,000 |
| Reliability Upgrade | 1a | 168 | National Grid, USA | | 09/2008 | Southwest Rhode Island Reliability Enhancements | Reconductor Kenyon - Wood River 115 kV 1870 line. | Under Construction | In-Service | 1/1/2005 | 03/29/2005 | \$2,600,000 | \$2,234,232 |
| Reliability Upgrade | 1a | 171 | National Grid, USA | | 10/2008 | Southwest Rhode Island Reliability Enhancements | Reconductoring L-190 between Kent Co. and Davisville. | Under Construction | In-Service | 11/10/2004 | 03/29/2005 | \$3,000,000 | \$2,666,291 |
| Reliability Upgrade | 1a | 900 | National Grid, USA | | 11/2008 | Southwest Rhode Island Reliability Enhancements | Wood River substation upgrades. | Under Construction | In-Service | 04/07/2007 | 05/07/2007 | \$240,000 | \$130,000 |
| Reliability Upgrade | 1a | 899 | National Grid, USA | | 12/2008 | Southwest Rhode Island Reliability Enhancements | Kenyon substation upgrades. | Under Construction | In-Service | 04/07/2007 | 05/07/2007 | \$278,000 | \$278,000 |
| Reliability Upgrade | 1a | 177 | Northeast Utilities | | 12/2008 | Monadnock Area Reliability Project | Replace limiting terminal equipment at Webster Substation on line to North Road. | Under Construction | In-Service | 03/24/2006 | No | Part of Monadnock Area Reliability Project | Part of Monadnock Area Reliability Project |
| Reliability Upgrade | 1a | 180 | Northeast Utilities | | 12/2008 | Monadnock Area Reliability Project | Rebuild 115 kV Keene to Swanzey A-152 line. | Under Construction | In-Service | 03/24/2006 | No | Part of Monadnock Area Reliability Project | Part of Monadnock Area Reliability Project |
| Reliability Upgrade | 1a | 178 | Northeast Utilities | | 02/2009 | Monadnock Area Reliability Project | Rebuild 115 kV Garvins to Webster V-182 line. | Under Construction | In-Service | 03/24/2006 | No | Part of Monadnock Area Reliability Project | Part of Monadnock Area Reliability Project |
| Reliability Upgrade | 1a | 248 | Northeast Utilities | | 12/2008 | Norwalk-Glenbrook Cable Project | Install two new 115 kV cables from Norwalk to Glenbrook (accommodate 345 kV class cable). | Under Construction | In-Service | 08/01/2005 | No | \$222,850,000 | \$249,372,000 ³ |
| Reliability Upgrade | 1a | 569 | Northeast Utilities-CT | | 2007 | Norwalk-Glenbrook Cable Project | Replace two 115-kV circuit breakers at Cos Cob. | In-Service | In-Service | 08/01/2005 | No | \$500,000 | Part of Norwalk-Glenbrook Cable Project ³ |
| Reliability Upgrade | 1a | 243 | Northeast Utilities | | 09/2008 | Norwalk-Glenbrook Cable Project | Expand and upgrade to BPS and remove SPS at Glenbrook 115 kV substation. | In-Service | In-Service | 08/01/2005 | No | \$8,390,000 | Part of Norwalk-Glenbrook Cable Project ³ |
| Reliability Upgrade | 1a | 570 | Northeast Utilities | | 10/2008 | Norwalk-Glenbrook Cable Project | Add second high speed relay system on the 1450 line. | In-Service | In-Service | 08/01/2005 | No | \$788,000 | Part of Norwalk-Glenbrook Cable Project ³ |
| Reliability Upgrade | 1a | 571 | Northeast Utilities | | 12/2008 | Norwalk-Glenbrook Cable Project | Upgrade Flax Hill Substation to BPS. | Under Construction | In-Service | 08/01/2005 | No | \$2,175,000 | Part of Norwalk-Glenbrook Cable Project ³ |
| Reliability Upgrade | 1a | 208 | Northeast Utilities | | 12/2008 | NU LSP - Oxford Substation | Install new Oxford (previously Jack's Hill) 115 kV substation. | Under Construction | In-Service | 01/14/2006 | 06/01/2007 | \$5,710,287 | \$4,459,000 |

Notes
 - Black shading indicates change from OCTOBER '08 Update.
 - All costs provided by Transmission Owners.

April '09 ISO-NEW ENGLAND Project Listing Update (FINAL)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
|-----------------------------------|-------|------------|--------------------------------|-----------------------------|---------------------------------|--|--|--------------------|----------------|----------------------|--------------|--|---|
| Reliability Upgrade | 1a | 246 | Northeast Utilities | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Add second 345/115 kV autotransformer at Norwalk Substation along with shunt reactors and 345 kV circuit breakers. | Under Construction | In-Service | 01/14/2006 | No | \$1,047,000,000 | \$978,182,000 ⁴ |
| Reliability Upgrade | 1a | 226 | Northeast Utilities | United Illuminating Company | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install two 345 kV underground cables from Singer(UI) to Norwalk. | Under Construction | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project | Part of SWCT (M-N) Reliability Project ⁴ |
| Reliability Upgrade | 1a | 235 | Northeast Utilities | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Expand Norwalk 345-kV substation and install transfer trip relaying scheme on the 1389 115 kV line between Norwalk and Flax Hill. | Under Construction | In-Service | 01/14/2006 | No | Part of SWCT (M-N) Reliability Project | Part of SWCT (M-N) Reliability Project ⁴ |
| Reliability Upgrade | 1a | 247 | Northeast Utilities | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Replace Norwalk Harbor 138/115 kV autotransformer. | Under Construction | In-Service | 01/14/2006 | No | \$8,351,000 | Part of SWCT (M-N) Reliability Project ⁴ |
| Reliability Upgrade | 1a | 684 | Northeast Utilities | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Replace (6) 115 kV breakers (4-Glenbrook, 1-Glenbrook Statcom, 1-Southington #1) and (3) 345-kV circuit breakers at Millstone and replace (4) 345- kV breakers with 500-kV breakers at Long Mountain substation. | Under Construction | In-Service | 01/14/2006 | No | \$11,321,000 | Part of SWCT (M-N) Reliability Project ⁴ |
| Reliability Upgrade | 1a | 551 | Northeast Utilities | | 10/2007 | Southwest Connecticut Reliability Project PH II (M-N) | Rebuild the 1466 115-kV line from East Meriden to North Wallingford and the 1588 115-kV rebuild from North Wallingford to Colony. | In-Service | In-Service | 04/01/2007 | No | \$805,000 | Part of SWCT (M-N) Reliability Project ⁴ |
| Reliability Upgrade | 1a | 244 | Northeast Utilities | | 6/20/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Reconductor 115 kV 1570 and 1575 line taps into Beacon Falls Substation. | In-Service | In-Service | 04/01/2007 | No | \$5,692,000 | Part of SWCT (M-N) Reliability Project ⁴ |
| Reliability Upgrade | 1a | 239 | Northeast Utilities | | 07/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install (1) new 115 kV circuit breaker at Devon Substation in series with 7R-2T. | In-Service | In-Service | 04/01/2007 | No | \$5,009,000 | Part of SWCT (M-N) Reliability Project ⁴ |
| Reliability Upgrade | 1a | 250 | Northeast Utilities | | 12/2008 | | Add a 345 kV breaker at Ludlow Substation. | Planned | In-service | 06/01/2007 | 8/1/2007 | \$1,644,885 | \$1,644,885 |
| Reliability Upgrade | 1a | 841 | NSTAR Electric Company | | 11/2008 | Mystic Breaker Additions Project | Install (2) new 115 kV West Bus breakers #29 and #31 at Mystic. | Planned | In-Service | 3/10/2008 | No | \$2,300,000 | \$2,300,000 |
| Reliability Upgrade | 1a | 1040 | NSTAR Electric Company | | 12/2008 | Mystic IPT Breaker Project | Upgrade (4) 115 kV breakers #11, #8, #17 and #3 at Mystic to IPT | Planned | In-Service | NR | NR | \$990,000 | \$990,000 |
| Reliability Upgrade | 1a | 116 | NSTAR Electric Company | | 04/2009 | NSTAR 345 kV Transmission Reliability Project | Add 2nd 345 kV UG Cables from Stoughton to Mattapan Sq.to K Street and install another new autotransformer at K. St. | Under Construction | In-Service | 02/10/2005 | 09/15/2005 | \$307,900,000 | \$307,900,000 |
| Reliability Upgrade | 1a | 572 | NSTAR Electric Company | | 04/2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 345 kV 160 MVAR shunt reactors at Stoughton. | Under Construction | In-Service | 02/10/2005 | 09/15/2005 | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project |
| Reliability Upgrade | 1a | 573 | NSTAR Electric Company | | 04/2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 345 kV 160 MVAR shunt reactors at K St. | Under Construction | In-Service | 02/10/2005 | 09/15/2005 | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project |
| Reliability Upgrade | 1a | 772 | NSTAR Electric Company | | 04/2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 115 kV breaker at K St. | Under Construction | In-Service | 02/01/2005 | 09/01/2005 | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project |
| Reliability Upgrade | 1a | 238 | United Illuminating Company | | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) | Build new Singer 345 kV substation with (12) circuit breakers, (2) autos, (4) shunt reactors along with reconnecting Bridgeport Energy thru one of the new autos. Includes 115 kV connection from Singer to Pequonnock substation. | Under Construction | In-Service | 01/14/2006 | No | \$162,264,000 | \$162,264,000 |
| Reliability Upgrade | 1a | 224 | United Illuminating Company | Northeast Utilities | 12/2008 | Southwest Connecticut Reliability Project PH II (M-N) ⁴ | Install new 345 kV line from East Devon to Singer(UI). | Under Construction | In-Service | 01/14/2006 | No | \$157,476,000 | \$157,476,000 |
| Reliability Upgrade | 1a | 846 | United Illuminating Company | | 11/2008 | | Replace Mix Avenue 115 kV Oil Circuit Breaker & foundation. | Under Construction | In-Service | NR | NR | \$450,000 | \$450,000 |
| Reliability Upgrade | 1a | 138 | Vermont Electric Power Company | | 12/2008 | Northwest Vermont Reliability Project | N. Haven - Vergennes - Q. City 115 kV line. | Under Construction | In-Service | 01/10/2003 | 12/18/2006 | \$70,200,000 | \$70,200,000 |
| Reliability Upgrade | 1a | 136 | Vermont Electric Power Company | | 04/2009 | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 1: two 115 kV PARs, four 25 MVAR Cap. banks, four +25/-12.5 MVAR synchronous condensers, and two 230/115 transformers. | Under Construction | In-Service | 01/10/2003 | 03/31/2003 | \$62,400,000 | \$62,400,000 |
| Generator Interconnection Upgrade | 2a | 847 | Bangor Hydro-Electric Company | | 12/2008 | Stetson Wind | Interconnect 60 MW of wind via 115 kV generator lead into Keene Road Substation. | Planned | In-Service | 07/01/2007 | NR | NR | NR |

| April '09 ISO-NEW ENGLAND Project Listing Update (FINAL) | | | | | | | | | | | | | |
|--|-------|------------|-----------------------------|--------------------------|---------------------------------|----------------------------|---|---------------|----------------|----------------------|--------------|----------------------------|----------------------------|
| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Oct-08 Status | Apr -09 Status | PPA (I.3.9) Approval | TCA Approval | Oct-08 Estimated PTF Costs | Apr-09 Estimated PTF Costs |
| CANCELLED PROJECTS | | | | | | | | | | | | | |
| Reliability Upgrade | 1b | 912 | Central Maine Power Company | | 12/2009 | CMP LSP - Anson Substation | Add 115 kV circuit breakers and transformer at Anson Section 63. | Concept | Cancelled | No | No | TBD | NR |
| Reliability Upgrade | 1b | 106 | Northeast Utilities | | TBD | | Upgrade the Southwest Hartford Substation to Bulk Power System standards (BPS). | Concept | Cancelled | 08/04/2004 | No | TBD | NR |
| Reliability Upgrade | 1b | 1069 | NSTAR Electric Company | | 07/2011 | NPCC BPS Compliance | Bourne Station | Proposed | Cancelled | No | No | \$8,800,000 | NR |

Notes

- ¹ Project pending solution documentation for the Greater Rhode Island Transmission Reinforcements.
- ² The Northeast Utilities' estimated costs for the NEEWS BPS upgrades are shared among the Greater Springfield, Central Connecticut, and Interstate portions of the NEEWS Project.
- ³ The total TCA (NU-07-TCA-24) PTF cost is \$234.2 million for the Norwalk - Glenbrook Project. The forecasted PTF cost is \$249.4 million.
- ⁴ The total TCA (NU-08-TCA-01) PTF cost is \$1.05 billion for Northeast Utilities portion of the Middletown-Norwalk Project. The forecasted PTF cost is \$978.2 million.

Local Project Listing Links

- NSTAR: http://www.nstar.com/business/rates_tariffs/open_access/
- CMP: <http://www.cmpco.com/SuppliersAndPartners/TransmissionServices/CMPTransmissionSvc/lsp.html>
- BHE: <http://www.bhe.com/data/OASIS/LSP.html>
- VELCO: <http://www.vermontspc.com/About%20the%20VSPC/Home.aspx>
- NU: http://www.transmission-nu.com/business/pdfs/NU_Local_Transmission_Studies_List.pdf
- NGRID: <http://www.nationalgridus.com/oasis/>
- UI: <http://www.uinet.com/uinet/resources/file/ebcfda4ccb73dd/UI%20Local%20System%20Plan.pdf>

**COST COMPARISON OF
RELIABILITY PROJECTS
November 2011 vs March 2012**

| | As of November 2011 Plan Update (in millions \$) | As of March 2012 Plan Update (in millions \$) | Change in Plan Estimate (in millions \$) |
|---|--|---|--|
| MAJOR PROJECTS | | | |
| Maine Power Reliability Program | 1440 | 1440 | 0 |
| Merrimack Valley / North Shore Reliability Project | 197 | 198 | 1 |
| Long Term Lower SEMA Upgrades | 113 | 113 | 0 |
| New England East - West Solution (NEEWS) NEEWS (Greater Springfield Reliability Project) \$746.80 NEEWS (Rhode Island Reliability Project) \$225.8 NEEWS (Central Connecticut Reliability Project) \$301.00 NEEWS (Interstate Reliability Project) \$604.66 | 1845 | 1878 | 33 |
| Greater Rhode Island Transmission Reinforcements (including Advanced NEEWS) | 242 | 242 | 0 |
| Pittsfield/Greenfield Project | 129 | 133 | 4 |
| Greater Boston - North, South, Central, Western Suburbs | 265 | 417 | 152 |
| New Hampshire Solution - Southern, Central, Seacoast, Northern | | 453 | 453 |
| Vermont Solution - Northwestern, Central, Southwestern | | 485 | 485 |
| SUBTOTAL ⁽²⁾ | 4231 | 5359 | 1128 |
| OTHER PROJECTS | 5352 | 5482 | 131 |
| NEW PROJECTS | | 4 | 4 |
| PROJECTS WHOSE COST ESTIMATES WERE PREVIOUSLY REPORTED AS TO BE DETERMINED (TBD) | | 132 | 132 |
| TOTAL ⁽²⁾ | 9582 | 10977 | 633 |
| Minus 'concept' | -128 | -132 | |
| Minus 'in-service' | -4421 | -4661 | |
| Aggregate estimate of active projects in the Plan ⁽²⁾ | 5033 | 6184 | |

5160.847295

6315.544234

| | | |
|------------------|----------------------|---|
| MAJOR PROJECTS | 5358.6400000 | |
| NEW PROJECTS | 3.900 | |
| TBD NOW W/ COSTS | 132.300 | |
| OTHER PROJECTS | 5482.07193900 | 5482.0719390 VERIFICATION of RED CELL |
| GRAND TOTAL | 10976.911939 | |
| ACTIVE COSTS | 6315.544234 | (typed in Project Total from Master File) |
| IN SERVICE | 240.16500000 | (typed in from In-service tab) |

Barbara Lynch:
Type in number in green
into cell AQ22

**COST COMPARISON OF
RELIABILITY PROJECTS
April 2011 vs June 2011**

| | As of April 2011 Plan Update (in millions \$) | As of June 2011 Plan Update (in millions \$) | Change in Plan Estimate (in millions \$) |
|---|---|--|--|
| MAJOR 345 kV PROJECTS | | | |
| Maine Power Reliability Program | 1546 | 1546 | 0 |
| Merrimack Valley / North Shore Reliability Project | 217 | 217 | 0 |
| Long Term Lower SEMA Upgrades | 107 | 113 | 6 |
| New England East - West Solution (NEEWS) (including Ancillary components) | 1992 | 1928 | -64 |
| Pittsfield/Greenfield Project | 129 | 129 | 0 |
| Greater Boston - North, South, Central | 292 | 292 | 0 |
| Greater Rhode Island Transmission Reinforcements (including Advanced NEEWS) | 279 | 279 | 0 |
| SUBTOTAL (a) | 4561 | 4503 | -58 |
| OTHER PROJECTS | 5061 | 5282 | 221 |
| NEW PROJECTS | | 39 | 39 |
| PROJECTS WHOSE COST ESTIMATES WERE PREVIOUSLY REPORTED AS TO BE DETERMINED (TBD) | | 7 | 7 |
| TOTAL (a) | 9622 | 9831 | 209 |
| Minus 'concept' | -139 | -142 | |
| Minus 'in-service' | -4328 | -4387 | |
| Aggregate estimate of active projects in the Plan (a) | 5155 | 5303 | |

| | | |
|------------------|----------------------|---------------------------------------|
| MAJOR PROJECTS | 4503.1520950 | |
| NEW PROJECTS | 39.000 | |
| TBD NOW W/ COSTS | 7.300 | |
| OTHER PROJECTS | 5475.07932500 | 5282.0000000 VERIFICATION of RED CELL |
| GRAND TOTAL | 9830.531420 | |
| ACTIVE COSTS | 5443.885715 (b) | |
| IN SERVICE | 58.5000000 (b) | |

Barbara Lynch:
Type in number in red
from cell AQ24 also
added in Vt Southern
Loop Project +194

rvega:
I updated the In-service
tab and Total Deviation
tab with the 58.5 as well
(b)

**COST COMPARISON OF
RELIABILITY PROJECTS
October 2010 vs April 2011**

| | As of October 2010 Plan Update (in millions \$) | As of April 2011 Plan Update (in millions \$) | Change in Plan Estimate (in millions \$) |
|--|--|--|---|
| MAJOR 345 kV PROJECTS | | | |
| Maine Power Reliability Program | 1356 | 1547 | 191 |
| Vermont Southern Loop Project | 208 | 194 | -14 |
| Merrimack Valley / North Shore Reliability Project | 218 | 217 | -1 |
| Long Term Lower SEMA Upgrades | 107 | 107 | 0 |
| New England East - West Solution (NEEWS) (including Ancillary components) | 1881 | 1992 | 111 |
| Pittsfield/Greenfield Project | | 129 | 129 |
| Greater Boston - North, South, Central Greater Rhode Island Transmission Reinforcements (including Advanced NEEWS) | 293 | 279 | -14 |
| SUBTOTAL ⁽²⁾ | 4063 | 4755 | 693 |
| OTHER PROJECTS | 4966 | 4952 | -14 |
| NEW PROJECTS | | 110 | 110 |
| AS TO BE DETERMINED (TBD) | | 0 | 0 |
| TOTAL ⁽²⁾ | 9029 | 9818 | 789 |
| Minus 'concept' | -141 | -139 | |
| Minus 'in-service' | -3960 | -4328 | |
| Aggregate estimate of active projects in the Plan ⁽²⁾ | 4928 | 5351 | |

rvega:
Includes RSP ID 1116 (Line 64 Rebuild) project. Confirm whether or not this project should be included in the cost estimate for MPRP. The October 2010 Update cost for MPRP excludes this project.

Barbara Lynch:
Type in number in red from cell AQ23

rvega:
Since this is zero for the April-11 Update, consider hiding this row.

| | |
|------------------|--|
| MAJOR PROJECTS | 4755.4520950 |
| NEW PROJECTS | 110.361 |
| TBD NOW W/ COSTS | 0.000 |
| OTHER PROJECTS | 4950.12260500 4952.0000000 VERIFICATION of RED CELL |
| GRAND TOTAL | 9815.935950 |
| ACTIVE COSTS | 5487.790245 (typed in from Master File) |
| IN SERVICE | 368.07400000 (typed in from In-service tab) |

April 10 -NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jul-09 Status | Oct-09 Status | I.3.9 Approval | TCA Approval | Jul-09 Estimated Costs | Oct 09 Estimated Costs | Why Needed |
|----------------|-------|------------|-------------------------|--------------------------|---------------------------------|---------------|---------|---------------|---------------|----------------|--------------|------------------------|------------------------|------------|
|----------------|-------|------------|-------------------------|--------------------------|---------------------------------|---------------|---------|---------------|---------------|----------------|--------------|------------------------|------------------------|------------|

IN-SERVICE PROJECTS

| | | | | | | | | | | | | | | |
|---------------------|----|------|--------------------------------|-----------------------------|---------|---|--|--------------------|------------|------------|----|---|---|--|
| Reliability Upgrade | 1a | 1051 | Central Maine Power Company | | 09/2009 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Riley 115 kV capacitor bank. | Under Construction | In-service | 11/30/2007 | No | Part of Project 625 | Part of Project 625 | |
| Reliability Upgrade | 1a | 267 | Northeast Utilities | Central Maine Power Company | 8/2009 | Y138 Closing | White Lake - Saco Valley (Y138) Line Closing - Add PAR on Y138 at Saco Valley, retension lines, upgrade Beebe terminal, and add capacitor banks at White Lake and Beebe. | Under Construction | In-service | 01/01/2006 | No | \$27,775,000 | \$27,775,000 | |
| Reliability Upgrade | 1a | 936 | National Grid, USA | | 07/2009 | Central/Western Massachusetts Upgrades | Reconductor (P142/P142S) Rolfe Avenue - West Bolyston 115 kV line w/1590 ACSR. | Under Construction | In-service | 12/17/2007 | No | \$3,000,000 | \$3,000,000 | |
| Reliability Upgrade | 1a | 176 | Northeast Utilities | | 07/2009 | Monadnock Area Reliability Project | New Fitzwilliam 345/115kV substation along with 345 kV breakers. | Under Construction | In-service | 9/27/2007 | No | \$76,100,000 | \$76,100,000 | |
| Reliability Upgrade | 1a | 174 | National Grid, USA | | 06/2009 | Monadnock Area Reliability Project | Reconductor I-135 (Bellows Falls-Monadnock Tap-Flagg Pond) 115 kV line. | Under Construction | In-service | 03/24/2006 | No | \$15,778,000 | \$15,778,000 | |
| Reliability Upgrade | 1a | 832 | NSTAR Electric Company | | 07/2009 | Short Term Lower SEMA Upgrades | Add(1) 115kV SVC (0-112 MVARs lagging) at Barnstable. | Under Construction | In-service | 08/17/2007 | No | \$82 M (Total NSTAR Project Cost Including Brook St. Station upgrade) | \$82 M (Total NSTAR Project Cost Including Brook St. Station upgrade) | |
| Reliability Upgrade | 1a | 182 | Vermont Electric Power Company | | 09/2009 | Monadnock Area Reliability Project | Upgrade bus cable at N. Rutland and K35 115 kV breaker at Rutland. | Under Construction | In-service | 03/24/2006 | NR | \$1,000,000 | \$1,000,000 | |
| | | | | | | | | | | | | Total | \$205,653,000 | |

| | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

| | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Notes
 - Gray shading indicates change from OCTOBER '07 Update.
 - All costs provided by Transmission Owners.

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|---|--------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|--------------|
| Reliability Upgrade | 1b | 1031 | ME | Bangor Hydro-Electric Company | | 12/2013 | Maine Power Reliability Program (MPRP) | Rebel Hill Switching Station | Concept | Concept | 10/22/2010 | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1154 | ME | Bangor Hydro-Electric Company | | 12/2013 | Maine Power Reliability Program (MPRP) | Rerate Line 66 | Concept | Concept | 10/22/2010 | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1155 | ME | Bangor Hydro-Electric Company | | 12/2014 | Maine Power Reliability Program (MPRP) | Capacitor Bank Addition (10 MVAR at Trenton 34.5kV and Epping) | Concept | Concept | 10/22/2010 | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 325 | VT | Vermont Electric Power Company | | TBD | VELCO LSP - Chelsea Substation | Replace (2) SCADA controlled motorized disconnect switches with 115 kV circuit breakers at the existing Chelsea substation to maintain adequate supply to the load. | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 324 | VT | Vermont Electric Power Company | | TBD | | Granite to Middlesex 230-kV line with necessary substation upgrades to mitigate several reliability concerns, including those related to the potential Highgate contract termination. | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 139 | VT | Vermont Electric Power Company | | TBD | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 2: synchronous condensers expanded to +200/- 100 MVAR and two 25 MVAR capacitor banks. | Concept | Concept | 01/10/2003 | 03/31/2003 | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1250 | VT | Vermont Electric Power Company | | 2016 | VELCO LSP - West Rutland Substation | Installation of a 115/46kV transformer at West Rutland between breakers K30 and K34 | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 593 | MA | NSTAR Electric Company | | 2013 | Mid Cape Reliability Project | Add a new 115 kV line from Bourne and Barnstable/Falmouth/equivalent | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1177 | MA | NSTAR Electric Company | | 12/2015 | Greater Boston - North | Reconductor 211-503/504 from North Woburn Tap to Reading | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1178 | MA | NSTAR Electric Company | | 12/2015 | Greater Boston - North | Install 115kV Capacitor Bank at North Woburn | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1190 | MA | NSTAR Electric Company | | 12/2015 | Greater Boston - North | Install a second 345/115kV Auto Transformer at Woburn | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 970 | MA | NSTAR Electric Company | | TBD | Greater Boston - Central | Add a new 345 kV line from Lexington to Waltham. | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 971 | MA | NSTAR Electric Company | | TBD | Greater Boston - Central | Add a new 345/230 kV auto at Waltham and 230 kV switching facilities. | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1176 | MA | NSTAR Electric Company | | TBD | Greater Boston - Central | Install an oil circulation pipe and heat exchangers at K Street and Chatham Street sections of 250-516/517 circuits | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1189 | MA | NSTAR Electric Company | | 12/2015 | Greater Boston - Central | Install 3rd 115kV Circuit between Waltham and Brighton | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1198 | MA | NSTAR Electric Company | | TBD | Greater Boston - Central | Add a second 115kV line from Woburn to Burlington | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1199 | MA | NSTAR Electric Company | | TBD | Greater Boston - Central | Install a new 230/115kV auto transformer at Sudbury or equivalent | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1191 | MA | NSTAR Electric Company | | 12/2012 | | Rebuild Section of Line 322 (Canal-Carver) | Concept | Concept | No | No | \$12,200,000 | \$12,200,000 | \$12,200,000 |
| Reliability Upgrade | 1b | 1181 | MA | NSTAR Electric Company | | 12/2013 | | Rebuild the High Hill 115kV Substation to a Breaker and a half design | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1204 | MA | NSTAR Electric Company | | 06/2012 | | Rebuild the Mashpee Substation to a Ring Bus and install an overvoltage trip relay on the Mashpee 115kV Capacitor Bank | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1205 | MA | NSTAR Electric Company | | 12/2013 | Mid-Cape Reliability Project | Separate 120 (Canal-Barnstable) /122 (Oak St-Barnstable) DCT | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1206 | MA | NSTAR Electric Company | | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system resoration | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1247 | MA | NSTAR Electric Company | | TBD | | Rebuild the Acushnet 115kV Substation | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1248 | MA | NSTAR Electric Company | | 12/2014 | | Rebuild the Kingston Substation to a breaker and a half scheme | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1249 | MA | NSTAR Electric Company | | 12/2013 | | Rebuild the Wareham Substation to a breaker and a half scheme | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1207 | MA | NSTAR Electric Company | | 2012 | Belmont Transmission Interconnection | Build a new 115kV Substation for the Belmont Transmission Interconnection | Concept | Concept | 2/26/2010 | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1255 | MA | CELD (Chicopee Electric Light Department) | | 12/2013 | CELD 115/13.8kV Substation | 115/13.8kV substation on Memorial Dr. with two transformers and twelve feeders looped into 1904 (1723) line between Piper and Fairmont substations | | Concept | No | No | | TBD | TBD |
| Reliability Upgrade | 1b | 1234 | RI | National Grid, USA | | 12/2015 | NEEWS (Interstate Reliability Project) | Install a 115kV redundant breaker in series with breaker #1713 at West Farmum Substation and upgrade to current BPS standards | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1084 | CT | Northeast Utilities | | TBD | Greater Hartford Central Connecticut Project | Loop the Millstone - Manchester (310) 345 kV line into the Card substation ⁽²⁾ | Concept | Concept | 9/24/2008 | No | TBD | TBD | TBD |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-------------------------|--------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|-----|
| Reliability Upgrade | 1b | 1086 | CT | Northeast Utilities | | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to 115kV line 1704, SW Hartford to South Meadow ⁽²⁾ | Concept | Concept | 9/24/2008 | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1087 | CT | Northeast Utilities | | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to line 115kV 1722 SW Hartford NW Hartford ⁽²⁾ | Concept | Concept | 9/24/2008 | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1088 | CT | Northeast Utilities | | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to 115kV line 1786, East Hartford to Riverside to South Meadow ⁽²⁾ | Concept | Concept | 9/24/2008 | No | TBD | TBD | TBD |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|--------------------------------|--------------------------|---------------------------------|---|---|---------------|---------------|--------------------------------|--------------------------------|---|---|---|
| Reliability Upgrade | 1b | 975 | CT | United Illuminating Company | | 06/2015 | | Pequonock 115 kV Fault Duty Mitigation. | Concept | Concept | No | No | \$105,000,000 | \$105,000,000 | \$105,000,000 |
| Reliability Upgrade | 1b | 699 | CT | United Illuminating Company | | 12/2014 | | Naugatuck Valley 115 kV reliability improvement. | Concept | Concept | No | No | \$11,100,000 | \$11,100,000 | \$11,100,000 |
| Reliability Upgrade | 1b | 801 | CT | Northeast Utilities | | TBD | | Build Manchester to East Hartford 115-kV cable with a series reactor. | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 85 | CT | Northeast Utilities | | TBD | | Upgrade the South Meadow Substation to Bulk Power System standards (BPS). | Concept | Concept | 08/04/2004 | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1228 | CT | Northeast Utilities | | TBD | Stamford Area | Additional circuit into the Stamford Area (Glenbrook-South End) | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1229 | CT | Northeast Utilities | | TBD | | Replace 115kV 1990 (Frost Bridge-Stevenson) lattice structure | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1230 | CT | Northeast Utilities | | TBD | LSP - Greater Hartford Area | 115kV breaker addition at Northeast Simsbury Substation | Concept | Concept | 3/30/2011 | No | TBD | TBD | TBD |
| Reliability Upgrade | 1b | 1243 | CT | CMEEC | | 10/2013 | TTD's Fitch St 115kV Substation | TTD 115/27kV substation with two transformers and a 115kV circuit breaker looped into 1416 line (between Compo and Darien substations) | Concept | Concept | No | No | TBD | TBD | TBD |
| Reliability Upgrade | 1a | 1197 | ME | Bangor Hydro-Electric Company | | 12/2013 | Keene Rd Autotransformer | Orrington 345kV Series Breaker Addition | Planned | Planned | 10/22/2010 | 6/16/2011 | \$1,761,250 | \$1,761,250 | \$1,761,250 |
| Reliability Upgrade | 1a | 907 | ME | Central Maine Power Company | | 05/2014 | Maine Power Reliability Program (MPRP) | Rebuild Existing 115kV lines: Sections 86 (Bucksport-Belfast), Section 203 (Detroit-Orrington), Sections 60 & 212 (Coopers Mills-Bowman St-Larrabee Road), Sections 89 & 229 (Livermore Falls-Riley-Rumford IP) | Planned | Planned | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 909 | ME | Central Maine Power Company | | 8/2014 | Maine Power Reliability Program (MPRP) | Add 2-115kV breakers & rebuild 86A, new .25 mile transmission at Belfast forming Sections 86 & 266 | Planned | Planned | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1025 | ME | Central Maine Power Company | | 05/2014 | Maine Power Reliability Program (MPRP) | Separation of Double Circuit Towers (345kV Kennebec River Crossing 375/377, 115kV Bucksport 65/205) | Planned | Planned | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1026 | ME | Central Maine Power Company | Northeast Utilities | 12/2013 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction associated with (Surowiec-Raven Farm, South Gorham-Maguire Road, Maguire Road-Elliott Switching Station) line work | Planned | Planned | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 (CMP) 4/14/2011 (NU) | Portion of CMP \$1.47B and portion of NU is \$36.0M | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M | \$36,000,000 |
| Reliability Upgrade | 1a | 1028 | ME | Central Maine Power Company | Northeast Utilities | 12/2013 | Maine Power Reliability Program (MPRP) | Rebuild existing 115kV Line (Section 250, Maguire Rd-Three Rivers) | Planned | Planned | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 (CMP) 4/14/2011 (NU) | Portion of CMP \$1.47B and portion of NU is \$36.0M | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M |
| Reliability Upgrade | 1a | 1030 | ME | Central Maine Power Company | | 11/2013 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Maguire Road) | Planned | Planned | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1132 | ME | Central Maine Power Company | | 8/2014 | Maine Power Reliability Program (MPRP) | Add 115/34kV transformer at Coopers Mills | Planned | Planned | 7/31/08 & 2/26/09 & 11/22/10 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1129 | ME | Central Maine Power Company | | 05/2012 | | New 115kV line between Wyman Hydro and Rice Rips Tap, parallel to exiting Section 83. Install a 115kV circuit breaker at Wyman Hydro termination | Planned | Planned | 1/26/2009 | 12/28/2010 | \$32,800,000 | \$32,800,000 | \$32,800,000 |
| Reliability Upgrade | 1a | 1135 | ME | Central Maine Power Company | | 02/2012 | CMP-Athens Substation LSP | Add two 115kV circuit breakers on Section 66; and 115/12kV transformer | Planned | Planned | 12/21/2007 | NR | \$1,500,000 | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 1184 | ME | Central Maine Power Company | | 05/2012 | Starks Switching Station | Add 4-115kV circuit breakers in a breaker-and a-half configuration on Section 63 and 2-18 MVar cap banks at a new Starks Switching Station | Planned | Planned | 9/20/2010 | 3/25/2011 | \$10,750,000 | \$9,750,000 | \$9,750,000 |
| Reliability Upgrade | 1a | 1251 | ME | Central Maine Power Company | | 12/2012 | Lakewood Substation Expansion | Sectionalize Section 241 by adding four 115kV circuit breakers at Lakewood Substation and install a second 115/34.5 kV transformer | Planned | Planned | 4/21/2011 | No | \$13,700,000 | \$13,700,000 | \$13,700,000 |
| Reliability Upgrade | 1a | 1141 | NH | Northeast Utilities | | 2015 | 2nd Deerfield 345/115kV Autotransformer Project | Rochester Substation Upgrades | Planned | Planned | 6/29/2009 | 7/15/2011 | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 680 | NH | National Grid, USA | | 06/2013 | | Rebuild Bellows Falls Substation and install 115 kV capacitor bank. | Planned | Planned | 1/28/2008 | No | \$7,393,000 | \$7,393,000 | \$7,393,000 |
| Reliability Upgrade | 1a | 674 | NH | National Grid, USA | | 12/2013 | | Replace Comerford 230 kV breakers and add (1) 230 kV bus tie breaker. | Planned | Planned | 4/1/2008 | No | \$19,460,000 | \$19,460,000 | \$19,460,000 |
| Reliability Upgrade | 1a | 1172 | VT | Vermont Electric Power Company | | 06/2012 | Vermont Shunt Reactors | Install 345kV 60 MVar shunt reactors (two at Coolidge and one at New Haven and relocate the New Haven reactor to Vernon) to address high voltage concerns | Planned | Planned | 3/23/2011 | No | \$20,000,000 | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 318 | VT | Vermont Electric Power Company | | 12/2012 | Georgia Substation Rebuild | Rebuild the existing Georgia substation 115 kV bus into a ring bus to address reliability problems due to breaker failure contingencies | Planned | Planned | 11/22/2010 | No | \$16,000,000 | \$16,000,000 | \$16,000,000 |
| Reliability Upgrade | 1a | 1169 | VT | Vermont Electric Power Company | | 12/2012 | Ascutney Substation Rebuild | Rebuild the existing Ascutney substation 115kV bus into a ring bus, to address reliability problems due to breaker failure contingencies | Planned | Planned | 11/22/2010 | No | \$14,500,000 | \$14,500,000 | \$14,500,000 |
| Reliability Upgrade | 1a | 1170 | VT | Vermont Electric Power Company | | 06/2013 | Bennington Substation Rebuild | Rebuild the existing Bennington substation 115kV bus into a ring bus to address reliability problems due to breaker failure contingencies | Planned | Planned | 11/22/2010 | No | \$23,000,000 | \$28,000,000 | \$28,000,000 |
| Reliability Upgrade | 1a | 1171 | VT | Vermont Electric Power Company | | 12/2011 | West Rutland Capacitor Rebuild | Install two 115kV 25 MVar capacitor banks at West Rutland to address low voltage concerns | Planned | Planned | 11/2/2010 | NR | \$2,400,000 | \$2,400,000 | \$2,400,000 |

Concept

40 \$128,300,000 \$128,300,000

40 \$128,300,000 \$128,300,000

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|--------------------------------|--------------------------|---------------------------------|--|--|---------------|---------------|------------------------|--------------|------------------------------|------------------------------|------------------------------|
| Reliability Upgrade | 1a | 1194 | VT | Vermont Electric Power Company | | 12/2012 | LSP Jay Substation | Construct a new 4-breaker ring substation at Jay with two 115/46kV transformers | Planned | Planned | 2/7/2011 | No | \$6,500,000 | \$6,500,000 | \$6,500,000 |
| Reliability Upgrade | 1a | 1195 | VT | Vermont Electric Power Company | | 03/2013 | Highgate Refurbishment | Replace Highgate controls and cooling system | Planned | Planned | NR | No | \$35,600,000 | \$35,600,000 | \$35,600,000 |
| Reliability Upgrade | 1a | 921 | MA | National Grid, USA | | 12/2012 | Auburn Area Transmission System Upgrades | Bridgewater substation - Upgrade Bus work and convert to BPS substation. | Planned | Planned | 1/28/2008 | No | \$40,000,000 | \$40,000,000 | \$40,000,000 |
| Reliability Upgrade | 1a | 919 | MA | National Grid, USA | | 04/2014 | Auburn Area Transmission System Upgrades | Dupont substation - Upgrade Buswork and convert to BPS substation. | Planned | Planned | 2/10/2010 | No | \$9,200,000 | \$13,600,000 | \$13,600,000 |
| Reliability Upgrade | 1a | 59 | MA | National Grid, USA | | 12/2012 | Auburn Reliability Transmission System Upgrades | G18, F19 line terminals 115kV upgrades at Bridgewater sub | Planned | Planned | 1/28/2008 | No | Part of RSP 921 | Part of RSP 921 | Part of RSP 921 |
| Reliability Upgrade | 1a | 840 | MA | NSTAR Electric Company | | 12/2012 | Merrimack Valley/North Shore Reliability Project | Upgrade the 115 kV line (Line 423-515) from Mystic-Everett by adding a new parallel cable to the existing 115 kV cable. (NSTAR portion only) | Planned | Planned | 4/1/2008 | 1/10/2011 | \$5,900,000 | \$5,900,000 | \$5,900,000 |
| Reliability Upgrade | 1a | 776 | MA | National Grid, USA | | 11/2012 | Merrimack Valley/North Shore Reliability Project | Re-conductor O-167 (NGRID portion of Mystic - Everett) 115 kV line. | Planned | Planned | 6/27/2008 | No | \$3,125,000 | \$3,125,000 | \$3,125,000 |
| Reliability Upgrade | 1a | 782 | MA | National Grid, USA | | 01/2016 | Merrimack Valley/North Shore Reliability Project | Replace existing S145/T146 UG cables with higher capacity cables between Salem Harbor and Railyard. | Planned | Planned | 6/27/2008 | No | \$43,912,000 | \$43,912,000 | \$43,912,000 |
| Reliability Upgrade | 1a | 1068 | MA | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Install a new 345kV line from Carver to vicinity of Bourne and connect to existing #120 line and install a 345kV - 115kV auto-transformer at new substation about 3 miles west of the Barnstable Substation Loop Line #115 in and out of the new Substation. Create a new line position at the Bourne Substation and connect the Bourne-Canal section of Line #120 | Planned | Planned | 07/2011 | No | \$106,500,000 | \$106,500,000 | \$106,500,000 |
| Reliability Upgrade | 1a | 592 | MA | NSTAR Electric Company | | 12/2012 | Long Term Lower SEMA Upgrades | Separate existing 345kV double circuit Cape Cod Canal crossing. The lines being separated are 322 (Canal-Carver) and 342 (Canal-Pilgrim-Auburn) | Planned | Planned | 07/2011 | No | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1a | 1118 | MA | National Grid, USA | NSTAR Electric Company | 12/2012 | Long Term Lower SEMA Upgrades | Upgrade 115kV line D21 (Bellrock-High Hill) | Planned | Planned | 07/2011 | No | \$6,000,000 | \$6,000,000 | \$6,000,000 |
| Reliability Upgrade | 1a | 1187 | MA | National Grid, USA | | 06/2014 | A127/B128 Conductor Refurbishment | A127/B128 Conductor Refurbishment - Tower 510 to Harriman Substation, VT | Planned | Planned | 12/17/2007 01/20/11 | NR | \$65,000,000 | \$65,000,000 | \$65,000,000 |
| Reliability Upgrade | 1a | 929 | MA | National Grid, USA | | 09/2013 | Central/Western Massachusetts Upgrades | Searsburg - install in-line 69 kV breaker for operational flexibility. | Planned | Planned | 12/17/2007 | No | \$2,500,000 | \$2,500,000 | \$2,500,000 |
| Reliability Upgrade | 1a | 931 | MA | National Grid, USA | | 01/2013 | Central/Western Massachusetts Upgrades | Park St. - incremental cost of designing for 115 kV instead of 69 kV. | Planned | Planned | 12/17/2007 | No | \$531,481 | \$531,481 | \$531,481 |
| Reliability Upgrade | 1a | 928 | MA | National Grid, USA | | 06/2013 | Central/Western Massachusetts Upgrades | Millbury -upgrade terminal equipment for O-141, P-142, B-128, A-127 circuit breakers. | Planned | Planned | 12/17/2007 | No | \$3,400,000 | \$3,400,000 | \$3,400,000 |
| Reliability Upgrade | 1a | 938 | MA | National Grid, USA | | 05/2013 | Central/Western Massachusetts Upgrades | Deerfield - install a new 115/69kV autotransformer and a 69kV breaker and disconnect switches. | Planned | Planned | 12/17/2007 | No | \$5,430,000 | \$5,430,000 | \$5,430,000 |
| Reliability Upgrade | 1a | 940 | MA | National Grid, USA | | 06/2014 | Central/Western Massachusetts Upgrades | Reconductor sections of A127W line w/795 ACSS (A127 West reconductoring. Tower 510 to Paxton, French King to French King). | Planned | Planned | 12/17/2007 | No | \$18,000,000 | \$18,000,000 | \$18,000,000 |
| Reliability Upgrade | 1a | 942 | MA | National Grid, USA | | 12/2012 | Central/Western Massachusetts Upgrades | Webster St. - add two 115 kV circuit breakers. | Planned | Planned | 12/17/2007 | No | \$3,650,000 | \$3,650,000 | \$3,650,000 |
| Reliability Upgrade | 1a | 925 | MA | National Grid, USA | | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - supply 13 kV from T3 and T4. | Planned | Planned | 12/17/2007 | No | Part of RSP 926 | Part of RSP 926 | Part of RSP 926 |
| Reliability Upgrade | 1a | 926 | MA | National Grid, USA | | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - replace T8 autotransformer with 230 kV 333 mVA, upgrade breaker and bus to 115 kV. Install high side 230 kV breaker. | Planned | Planned | 12/17/2007 | No | \$14,700,000 | \$14,700,000 | \$14,700,000 |
| Reliability Upgrade | 1a | 932 | MA | National Grid, USA | | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - increase thermal rating of I-135 and J-136 buswork. | Planned | Planned | 12/17/2007 | No | Part of RSP 926 | Part of RSP 926 | Part of RSP 926 |
| Reliability Upgrade | 1a | 941 | MA | National Grid, USA | | 8/2013 | Central/Western Massachusetts Upgrades | Install new Z126 Millbury - Tower #510 115 kV line. | Planned | Planned | 12/17/2007 | No | \$13,748,000 | \$13,748,000 | \$13,748,000 |
| Reliability Upgrade | 1a | 943 | MA | National Grid, USA | | 12/2012 | Central/Western Massachusetts Upgrades | Millbury - new 115 kV breaker position for new line to Twr 510. | Planned | Planned | 12/17/2007 | No | \$4,100,000 | \$4,100,000 | \$4,100,000 |
| Reliability Upgrade | 1a | 950 | MA | National Grid, USA | | 02/2015 | Central/Western Massachusetts Upgrades | E Winchendon - install 115 kV breaker and 115 kV disconnect switch. | Planned | Planned | 12/17/2007 | No | \$1,016,897 | \$1,016,897 | \$1,016,897 |
| Reliability Upgrade | 1a | 953 | MA | National Grid, USA | | 02/2015 | Central/Western Massachusetts Upgrades | Otter River - expand substation into 6-breaker ring bus with four 115 kV breakers and install two transformers. | Planned | Planned | 12/17/2007 | No | \$10,248,067 | \$10,248,067 | \$10,248,067 |
| Reliability Upgrade | 1a | 954 | MA | National Grid, USA | | 02/2015 | Central/Western Massachusetts Upgrades | Westminster - install new 69kV breaker, including disconnect switches. | Planned | Planned | 12/17/2007 | No | \$903,909 | \$903,909 | \$903,909 |
| Reliability Upgrade | 1a | 945 | MA | National Grid, USA | | 05/2014 | Central/Western Massachusetts Upgrades | Adams - install two new 115 kV breakers and replace two existing 115kV breakers | Planned | Planned | 12/17/2007 | No | \$5,000,000 | \$5,000,000 | \$5,000,000 |
| Reliability Upgrade | 1a | 946 | MA | National Grid, USA | | 04/2015 | Central/Western Massachusetts Upgrades | Convert 69 kV (O-15S) Palmer- Hampden to 115 kV. | Planned | Planned | 3/29/2011 | No | \$16,000,000 | \$16,000,000 | \$16,000,000 |
| Reliability Upgrade | 1a | 948 | MA | National Grid, USA | | 05/2014 | Central/Western Massachusetts Upgrades | Hampden - build new 115 kV substation at 1515/O-15S intersection (4 breaker ring). | Planned | Planned | 3/29/2011 | No | \$13,400,000 | \$13,400,000 | \$13,400,000 |
| Reliability Upgrade | 1a | 949 | MA | National Grid, USA | | 04/2015 | Central/Western Massachusetts Upgrades | Palmer - add 115 kV breaker position for O15S conversion, includes thermal upgrade of W-175 bay. | Planned | Planned | 3/29/2011 | No | \$1,600,000 | \$1,600,000 | \$1,600,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-------------------------|--------------------------|---------------------------------|---|---|---------------|---------------|----------------------|--------------|---|---|---|
| Reliability Upgrade | 1a | 937 | MA | National Grid, USA | | 12/2015 | Central/Western Massachusetts Upgrades | Bear Swamp - install one 230-115 kV 333 mVA auto. one 115 kV breaker and upgrade various terminal equipment. | Planned | Planned | 12/17/2007 | No | \$6,602,875 | \$6,602,875 | \$6,602,875 |
| Reliability Upgrade | 1a | 955 | MA | National Grid, USA | | 10/2012 | Central/Western Massachusetts Upgrades | Reconductor (W175) W Charlton - Little Rest - Palmer w/1590 ACSR. | Planned | Planned | 12/17/2007 | No | \$13,800,000 | \$13,800,000 | \$13,800,000 |
| Reliability Upgrade | 1a | 951 | MA | National Grid, USA | | 01/2014 | Central/Western Massachusetts Upgrades | Install new Otter River - E Winchendon (H-134) 115 kV line. | Planned | Planned | 12/17/2007 | No | \$7,455,440 | \$7,455,440 | \$7,455,440 |
| Reliability Upgrade | 1a | 1217 | MA | Northeast Utilities | | 12/2012 | Central/Western Massachusetts Upgrades | Substation work at Ludlow (MA) and Scitico (CT) associated with the new Hampden (MA) substation project (Ngrid) | Planned | Planned | 12/17/2007 | No | \$3,140,000 | \$3,140,000 | \$3,140,000 |
| Reliability Upgrade | 1a | 687 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Fairmont 16H Substation Expansion | Planned | Planned | 9/24/2008 | No | \$795,000,000 | \$718,000,000 | \$718,000,000 |
| Reliability Upgrade | 1a | 826 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | South Agawam 42E Substation Reconfigure | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 828 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Breckwood 115kV circuit 1322 Reactor Bypass and Open Breckwood Substation 1T breaker and maintain breaker in the normally open position | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1075 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add 2nd high speed protection scheme to Agawam to Elm (1007) 115kV line if the Russell Biomass Plant, queue position #135 is constructed | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1078 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Pineshed (1327) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1079 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Mt. Tom (1428) 115kV line | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1080 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Replace 4T and 6T 115kV circuit breaker to Shawinigan substation | Planned | Planned | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1094 | MA | National Grid, USA | | 12/2015 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV Millbury Substation equipment | Planned | Planned | 9/24/2008 | No | \$25,000,000 | \$25,000,000 | \$25,000,000 |
| Reliability Upgrade | 1a | 1202 | MA | NSTAR Electric Company | | 06/2013 | NEEWS (Ancillary Interstate Reliability Project) | Rebuild 1.2 mile length of line 336 with 2-900 ACSS conductor and replace 5, 345kV 2000 amp disconnect switches with 3000 amp switches at W. Medway station | Planned | Planned | 3/30/2011 | NR | \$1,700,000 | \$1,700,000 | \$1,700,000 |
| Reliability Upgrade | 1a | 791 | MA | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | New 115 kV circuit between Somerset and Brayton Point. | Planned | Planned | 4/25/2008 | No | \$11,560,000 | \$11,560,000 | \$11,560,000 |
| Reliability Upgrade | 1a | 913 | MA | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Brayton Point substation reinforcements to accommodate the new 115 kV line. | Planned | Planned | 4/25/2008 | No | \$3,250,000 | \$3,250,000 | \$3,250,000 |
| Reliability Upgrade | 1a | 914 | MA | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | New third circuit between Somerset and Bell Rock. | Planned | Planned | 4/25/2008 | No | \$28,150,000 | \$28,150,000 | \$28,150,000 |
| Reliability Upgrade | 1a | 917 | MA | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Bell Rock substation expansion. | Planned | Planned | 4/25/2008 | No | \$7,000,000 | \$7,000,000 | \$7,000,000 |
| Reliability Upgrade | 1a | 793 | MA | National Grid, USA | | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Somerset substation reinforcements. | Planned | Planned | 4/25/2008 | No | \$6,400,000 | \$6,400,000 | \$6,400,000 |
| Reliability Upgrade | 1a | 1268 | MA | Northeast Utilities | | 12/2012 | | 345kV Northfield Mountain to Berkshire (portion of 312) line structure replacements | | Planned | NR | No | \$7,900,000 | \$7,900,000 | \$7,900,000 |
| Reliability Upgrade | 1a | 673 | MA | National Grid, USA | | 12/2012 | Worcester Area Reinforcements | Add new 115kV bay to separate the M-165 & E-157 terminal at Millbury #2 Substation | Planned | Planned | 2/27/2009 | No | \$2,200,000 | \$2,200,000 | \$2,200,000 |
| Reliability Upgrade | 1a | 676 | MA | National Grid, USA | | 12/2012 | Worcester Area Reinforcements | New Bloomingdale to Vernon Hill 115 kV (UG Cable-3.6 mi.) new 115kV breaker at Bloomingdale & Vernon Hill | Planned | Planned | 2/27/2009 | No | \$30,000,000 | \$30,000,000 | \$30,000,000 |
| Reliability Upgrade | 1a | 1257 | MA | National Grid, USA | | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the S-145/T-146 from Tewksbury-North Reading Tap (9.3 miles each) | | Planned | 7/28/2011 | No | | \$29,000,000 | \$29,000,000 |
| Reliability Upgrade | 1a | 1258 | MA | National Grid, USA | | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the Y-151 from Tewksbury Junction - West Methuen (8.2 miles) | | Planned | 7/28/2011 | No | | \$11,500,000 | \$11,500,000 |
| Reliability Upgrade | 1a | 1259 | MA | National Grid, USA | | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the B154/C-155N from King St Tap - South Danvers (14.5 miles each way) | | Planned | 7/28/2011 | No | | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 1201 | MA | NSTAR Electric Company | NGRID | 12/2012 | Greater Boston - North | 115kV line Reconductoring of the P168/128-518 Line between Chelsea and Revere (NSTAR Portion of the line) | Proposed | Planned | 3/25/2011 | NR | \$800,000 | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 1168 | MA | Holyoke Gas & Electric | | 12/2012 | North Canal 44P | Loop the 1525 (Holyoke Fairmont South 115kV) line into the new North Canal 44P | Proposed | Planned | 5/25/2011 | No | \$4,100,000 | \$4,100,000 | \$4,100,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-----------------------------|--------------------------|---------------------------------|--|---|---------------|---------------|----------------------|--------------|----------------------------|----------------------------|--------------|
| Reliability Upgrade | 1b | 1279 | ME | Central Maine Power Company | | 12/2014 | | New 345/115kV Autotransformer and 115kV switchyard at Raven Farm substation consisting of a four-bay breaker and a half configuration of eleven (11) breakers | | Proposed | 1/29/2010 | No | | \$26,126,000 | \$26,126,000 |
| Reliability Upgrade | 1b | 1280 | ME | Central Maine Power Company | | 12/2014 | | New 115kV line section 244 and upgraded line section 80 between Coopers Mill and Highland Substations | | Proposed | 1/29/2010 | No | | \$62,735,000 | \$62,735,000 |
| Reliability Upgrade | 1b | 1183 | NH | Northeast Utilities | | 2014 | LSP New Peaselee Substation and 115/34.5KV transformer | New 115kV Peaselee Substation and transmission line work | Proposed | Proposed | No | No | \$12,400,000 | \$12,400,000 | \$12,400,000 |
| Reliability Upgrade | 1b | 1220 | NH | Northeast Utilities | | 12/2015 | Greater Boston - North | Install a new 345kV circuit between Scobie and Pelham NH (this is NU's portion of the new Scobie-Tewksbury circuit) | Proposed | Proposed | No | No | \$40,100,000 | \$40,100,000 | \$40,100,000 |
| Reliability Upgrade | 1b | 1269 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Amherst Substation - New 345kV breaker and three 25MVar Capacitor Banks | | Proposed | No | No | | \$19,600,000 | \$19,600,000 |
| Reliability Upgrade | 1b | 1270 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | New 115kV line from Fitzwilliams to Monadnock | | Proposed | No | No | | \$10,500,000 | \$10,500,000 |
| Reliability Upgrade | 1b | 1271 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Upgrade the Keene to Monadnock (T198) 115kV line | | Proposed | No | No | | \$11,900,000 | \$11,900,000 |
| Reliability Upgrade | 1b | 1272 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Weare Substation - Add two 13.3 MVar 115V capacitors | | Proposed | No | No | | \$3,600,000 | \$3,600,000 |
| Reliability Upgrade | 1b | 1273 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Rebuild A152 115kV line | | Proposed | No | No | | \$22,500,000 | \$22,500,000 |
| Reliability Upgrade | 1b | 1274 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Rebuild N186 115kV line | | Proposed | No | No | | \$2,300,000 | \$2,300,000 |
| Reliability Upgrade | 1b | 1275 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Upgrade the 381 345kV line | | Proposed | No | No | | \$4,200,000 | \$4,200,000 |
| Reliability Upgrade | 1b | 1276 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Littleton Substation - Add a second 230/115kV autotransformer and associated 115kV substation work | | Proposed | No | No | | \$16,700,000 | \$16,700,000 |
| Reliability Upgrade | 1b | 1277 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Webster Substation - Add four 26.6 MVar 115kV capacitors | | Proposed | No | No | | \$11,900,000 | \$11,900,000 |
| Reliability Upgrade | 1b | 1278 | NH | Northeast Utilities | | TBD | Western New Hampshire Solution | Saco Valley Substation - Add two 25 MVar dynamic Var devices | | Proposed | No | No | | \$15,800,000 | \$15,800,000 |
| Reliability Upgrade | 1b | 1263 | NH | National Grid, USA | | TBD | Northern New Hampshire Solution | New C-203 230kV line tap to Littleton NH Substation associated with 2nd 230/115kV auto project | | Proposed | No | No | | \$1,100,000 | \$1,100,000 |
| Reliability Upgrade | 1b | 843 | MA | NSTAR Electric Company | | 06/2012 | Boston Area 115 kV Enhancements | Install (2) new 115 kV breakers at Trapelo Road. | Concept | Proposed | No | NR | \$3,200,000 | \$3,450,000 | \$3,450,000 |
| Reliability Upgrade | 1b | 965 | MA | NSTAR Electric Company | | 06/2014 | Greater Boston - South | Add third 115kV line from W. Walpole to Holbrook | Proposed | Proposed | No | No | \$19,000,000 | \$19,000,000 | \$19,000,000 |
| Reliability Upgrade | 1b | 1175 | MA | NSTAR Electric Company | | 12/2013 | Greater Boston - South | Upgrade the 115kV line 201-501 (Medway-Depot St.) and the 201-502 (Beaver Pond - Depot Street Tap) to a higher capacity line | Proposed | Proposed | No | NR | \$3,700,000 | \$3,700,000 | \$3,700,000 |
| Reliability Upgrade | 1b | 1214 | MA | National Grid, USA | | 12/2015 | Greater Boston - South | Line Reconductoring of the C-129 Beaver Pond - Depot St. Tap) and D-130 (Depot St. Tap - Medway) 115kV lines | Proposed | Proposed | No | No | \$500,000 | \$500,000 | \$500,000 |
| Reliability Upgrade | 1b | 1179 | MA | NSTAR Electric Company | | 12/2015 | Greater Boston - North | Install 2nd 345kV circuit between Bellerica/Burlington town line to Tewksbury | Proposed | Proposed | No | No | \$33,000,000 | \$33,000,000 | \$33,000,000 |
| Reliability Upgrade | 1b | 1200 | MA | NSTAR Electric Company | | TBD | Greater Boston - North | Add a new 345kV UG circuit between Woburn and North Cambridge | Proposed | Proposed | No | No | \$52,000,000 | \$52,000,000 | \$52,000,000 |
| Reliability Upgrade | 1b | 1211 | MA | National Grid, USA | | 12/2015 | Greater Boston - North | Install 2nd 345kV circuit between Tewksbury - Billerica/Burlington Town Line (NSTAR Border) | Proposed | Proposed | No | No | \$32,700,000 | \$32,700,000 | \$32,700,000 |
| Reliability Upgrade | 1b | 1212 | MA | National Grid, USA | | 12/2015 | Greater Boston - North | 115kV Line Reconductoring of M-139/N-140 Tewksbury-Pinehurst (6.1 miles each) | Proposed | Proposed | No | No | \$57,000,000 | \$11,600,000 | \$11,600,000 |
| Reliability Upgrade | 1b | 1213 | MA | National Grid, USA | | 12/2015 | Greater Boston - North | Install new 345kV circuit between NH/MA border and Tewksbury (this is NGRID's portion of the new Scobie-Tewksbury circuit) | Proposed | Proposed | No | No | \$23,370,000 | \$23,370,000 | \$23,370,000 |
| Reliability Upgrade | 1b | 1215 | MA | National Grid, USA | | 12/2015 | Greater Boston - North | New 115kV line between Wakefield - Everett | Proposed | Proposed | No | No | \$20,000,000 | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1b | 1254 | MA | National Grid, USA | | 12/2015 | Greater Boston - North | Substation work at Revere Substation to increase ratings on the 128-515P/168 line between Chelsea and Revere | Concept | Proposed | No | No | TBD | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1b | 1260 | MA | National Grid, USA | | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the F-158N/S Wakefield Jct - Everett (7.36 miles) | | Proposed | No | No | TBD | \$3,500,000 | \$3,500,000 |
| Reliability Upgrade | 1b | 1261 | MA | National Grid, USA | | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the S-145T-146 from North Reading Tap - Wakefield Jct (5.1 miles each) | | Proposed | No | No | TBD | \$10,800,000 | \$10,800,000 |
| Reliability Upgrade | 1b | 1262 | MA | National Grid, USA | | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the Y-151 from Tewksbury Junction - Tewksbury Substation (1.6 miles) | | Proposed | No | No | TBD | \$1,250,000 | \$1,250,000 |
| Reliability Upgrade | 1b | 1208 | MA | National Grid, USA | | 12/2014 | Pittsfield / Greenfield Project | Separation and reconductoring of Cabot Taps (A-127 and Y-177 115kV lines) | Proposed | Proposed | No | No | \$7,400,000 | \$7,400,000 | \$7,400,000 |
| Reliability Upgrade | 1b | 1209 | MA | National Grid, USA | | 12/2014 | Pittsfield / Greenfield Project | Reconductoring of A-127 between Erving and Cabot Tap with 1590 ACSS | Proposed | Proposed | No | No | \$12,000,000 | \$12,000,000 | \$12,000,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs |
|---------------------|-------|------------|-------|-------------------------------|--------------------------|---------------------------------|---|---|--------------------|--------------------|--------------------------------|--------------|---|---|
| Reliability Upgrade | 1b | 1210 | MA | National Grid, USA | | 12/2014 | Pittsfield / Greenfield Project | Harriman 115kV breaker upgrades | Proposed | Proposed | No | No | \$1,100,000 | \$1,100,000 |
| Reliability Upgrade | 1b | 1221 | MA | Northeast Utilities | | 11/2014 | Pittsfield / Greenfield Project | Modify Northfield Mountain 16R substation and install a 345/115kV autotransformer | Proposed | Proposed | No | No | \$108,500,000 | \$108,500,000 |
| Reliability Upgrade | 1b | 1222 | MA | Northeast Utilities | | 11/2014 | Pittsfield / Greenfield Project | Build a new 115kV three breaker Switching Station (Erving) ring bus | Proposed | Proposed | No | No | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1223 | MA | Northeast Utilities | | 11/2014 | Pittsfield / Greenfield Project | Build a new 115kV line from Northfield Mountain to the new Erving Switching Station | Proposed | Proposed | No | No | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1224 | MA | Northeast Utilities | | 11/2014 | Pittsfield / Greenfield Project | Install 115kV 14.4 MVAR capacitor banks at Cumberland, Podick and Amherst Substations | Proposed | Proposed | No | No | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1225 | MA | Northeast Utilities | | 11/2014 | Pittsfield / Greenfield Project | Rebuild the Cumberland to Montague 1361 115kV line and terminal work at Cumberland and Montague | Proposed | Proposed | No | No | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1226 | MA | Northeast Utilities | | 11/2014 | Pittsfield / Greenfield Project | Reconductor the Woodland to Pleasant 1371 115-kV line and terminal work at Woodland substation. | Proposed | Proposed | No | No | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 956 | MA | National Grid, USA | | 01/2015 | Central/Western Massachusetts Upgrades | Carpenter Hill - replace one 345 kV, 448 MVA autotransformer and upgrade thermal rating of bus to at least 580 MVA. | Proposed | Proposed | No | No | \$7,021,534 | \$7,021,534 |
| Reliability Upgrade | 1b | 1252 | MA | National Grid, USA | | 12/2015 | NEEWS (Interstate Reliability Project) | Re-conductor 345kV 328 line (West Farnum-Sherman Rd) | Concept | Proposed | No | No | TBD | \$36,500,000 |
| Reliability Upgrade | 1b | 1233 | RI | National Grid, USA | | 12/2015 | NEEWS (Interstate Reliability Project) | New Sherman Road 345kV AIS Substation | Concept | Proposed | No | No | TBD | \$36,600,000 |
| Reliability Upgrade | 1b | 1242 | CT | CMEEC | | 10/2012 | SNEW 115kV substation | SNEW 115/13.8kV substation with two transformers and a 115kV circuit breaker looped into the 1890 line (between Norwalk Hbr - Ely Ave) | Proposed | Proposed | No | No | \$2,000,000 | \$2,000,000 |
| Reliability Upgrade | 1b | 1244 | CT | CMEEC | | 10/2011 | 115kV Circuit Breaker Installation | Install 115kV Bus Tie Circuit Breaker at Stock House Rd Substation | Proposed | Proposed | No | No | \$750,000 | \$750,000 |
| Reliability Upgrade | 1b | 1246 | CT | United Illuminating Company | | 09/2013 | 8300 Line Reconfiguration Project | Reconfiguration of 115kV (8300) line from Mill River to Quinpiac | Proposed | Proposed | No | No | \$17,400,000 | \$17,400,000 |
| Reliability Upgrade | 1a | 1116 | ME | Bangor Hydro-Electric Company | | 12/2011 | Maine Power Reliability Program (MPRP) | L 64 Rebuild | Under Construction | Under Construction | 10/22/2010 | 6/16/2011 | \$37,126,000 | \$37,626,000 |
| Reliability Upgrade | 1a | 1156 | ME | Bangor Hydro-Electric Company | | 12/2011 | Maine Power Reliability Program (MPRP) | Orrington Shunt Cap Reconfiguration | Under Construction | Under Construction | 10/22/2010 | 6/16/2011 | \$2,260,262 | \$2,260,262 |
| Reliability Upgrade | 1a | 905 | ME | Central Maine Power Company | | 8/2014 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Orrington-Albion Rd-Coopers Mills, Coopers Mills-Larrabee Road, Larrabee Road-Surweic). | Under Construction | Under Construction | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 | \$1,470,187,000 | \$1,364,108,000 |
| Reliability Upgrade | 1a | 906 | ME | Central Maine Power Company | | 05/2014 | Maine Power Reliability Program (MPRP) | New 115kV line construction (Orrington-Coopers Mills, Larrabee Road-Middle St,Middle St -Lewiston Lower, Larrabee Road-Livermore Falls, Livermore Falls-Rumford IP) | Under Construction | Under Construction | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 908 | ME | Central Maine Power Company | | 07/2014 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Albion Road, Larrabee Road); Coopers Mills autotransformer replaces Maxcy's autotransformer | Under Construction | Under Construction | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1158 | ME | Central Maine Power Company | | 07/2014 | Maine Power Reliability Program (MPRP) | Two 40 MVAR reactors at Albion Road, two 40 MVAR reactors at Larabee Road, two 40 MVAR at Coopers Mills | Under Construction | Under Construction | 7/31/2008 & 2/26/09 & 11/22/10 | 1/29/2010 | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 143 | ME | Bangor Hydro-Electric Company | | 12/2012 | Down East Reliability Improvement | Contract 115 kV from Trenton tap (part of Hancock Reliability Project) to new Tunk Lake Substation (2 new breakers) to Harrington Substation (3 new breakers) | Under Construction | Under Construction | 5/10/2006 | 6/13/2008 | \$66,100,000 | \$66,100,000 |
| Reliability Upgrade | 1a | 1131 | ME | Central Maine Power Company | | 11/2011 | CMP-LSP Bowman St. Substation | Add 115/34kV transformer | Planned | Under Construction | 11/22/2010 | NR | \$600,000 | \$600,000 |
| Reliability Upgrade | 1a | 1196 | ME | Bangor Hydro-Electric Company | | 01/2012 | SVC Filter Upgrade (Part of Keene Rd Auto-transformer ID 144) | Upgrade of filter bank at Chester SVC facility | Under Construction | Under Construction | 7/15/2011 | 7/15/2011 | \$3,500,000 | \$3,500,000 |
| Reliability Upgrade | 1a | 1219 | NH | Northeast Utilities | | 12/2011 | | Install 115kV two 13.3 MVAR capacitor banks at Oak Hill substation | Planned | Under Construction | 2/28/2011 | NR | \$3,800,000 | \$4,000,000 |
| Reliability Upgrade | 1a | 277 | NH | Northeast Utilities | | 11/2011 | 2nd Deerfield 345/115kV Autotransformer Project | Add 2nd 345/115 kV autotransformer and 3-345kV breakers at Deerfield substation. | Under Construction | Under Construction | 6/29/2009 | 7/15/2011 | \$52,000,000 | \$52,000,000 |
| Reliability Upgrade | 1a | 1140 | NH | Northeast Utilities | | 10/2011 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV C129 Line | Under Construction | Under Construction | 6/29/2009 | 7/15/2011 | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1182 | NH | Northeast Utilities | | 06/2012 | LSP New Eagle Substation and 115/34.5kV transformer | New 115kV Eagle Substation connected to 115/34.5kV Thornton Substation | Planned | Under Construction | 7/27/2010 | No | \$22,800,000 | \$22,800,000 |
| Reliability Upgrade | 1a | 887 | MA | National Grid, USA | | 06/2013 | Auburn Area Transmission System Upgrades | Expand Auburn St Substation to include 2nd 345/115 kV autotransformer and 345 kV ring bus. | Under Construction | Under Construction | 2/10/2010 | No | \$66,300,000 | \$58,000,000 |
| Reliability Upgrade | 1a | 1165 | MA | NSTAR Electric Company | | 12/2011 | Mystic Breaker Additions Project | Move Transformer 110B Connection at Mystic | Planned | Under Construction | 3/10/2008 | NR | \$1,700,000 | \$2,600,000 |
| Reliability Upgrade | 1a | 934 | MA | National Grid, USA | | 12/2012 | Central/Western Massachusetts Upgrades | Reconductor #2 Tap from Tower 510 - Webster St. 115 kV circuit. | Under Construction | Under Construction | 12/17/2007 | No | Part of RSP 935 | Part of RSP 935 |

45 Proposed -25% 25%

45 **\$706,902,534** **\$530,176,901** **\$883,628,168**

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-------------------------|--------------------------|---------------------------------|---|---|--------------------|--------------------|----------------------|--------------|---|---|---|
| Reliability Upgrade | 1a | 935 | MA | National Grid, USA | | 12/2012 | Central/Western Massachusetts Upgrades | Reconductor from (A-127E/B-128E) Millbury - Tower 510 115 kV line. | Under Construction | Under Construction | 12/17/2007 | No | \$10,200,000 | \$10,200,000 | \$10,200,000 |
| Reliability Upgrade | 1a | 944 | MA | National Grid, USA | | 03/2012 | Central/Western Massachusetts Upgrades | Wachusett - install one 345 kV, 448 mVA transformer, one 345 kV breaker, and one 115 kV breaker. | Planned | Under Construction | 12/17/2007 | No | \$16,530,000 | \$15,700,000 | \$15,700,000 |
| Reliability Upgrade | 1a | 1076 | MA | Northeast Utilities | | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1311) 115kV line | Under Construction | Under Construction | 9/24/2008 | No | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 196 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line (3216), Agawam (MA) - North Bloomfield (CT) | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 818 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reconstruct the 115kV line South Agawam to Southwick (1768) | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 819 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line Ludlow - Agawam (3196) | Under Construction | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 820 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Expansion of Agawam 16C 115 kV Substation to include new 345 kV station with two 345/115-kV autotransformers. | Under Construction | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 823 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Ludlow 19S 345 kV Substation Expansion, two 345/115kV Autotransformers replacements. Add two 345kV 120 MVar Capacitor additions | Under Construction | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 829 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Piper (1230) 115 kV line. | Under Construction | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1010 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build 115-kV Cadwell switching 50F station. | Under Construction | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 259 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to Orchard (1426) 115kV line | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 688 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Cadwell (1481) 115kV line | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1100 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Chicopee (1314) 115kV line | Under Construction | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1101 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Orchard (1552) 115kV line | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1102 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Piper (1601) 115kV line | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1103 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Chicopee (1602) 115kV line | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1104 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Cadwell (1603) 115kV line and add 2nd High Speed Protection | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1105 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Shawinigan (1604) 115kV line and add a 2nd High Speed Protection | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1070 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1781) 115kV line and add a 2nd High Speed Protection | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1071 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1782) 115kV line and add a 2nd High Speed Protection | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1072 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Shawinigan (1845) 115kV line and add 2nd High Speed Protection | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1073 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reterminate Cadwell to East Springfield (5001) 115kV line | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1074 | MA | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reterminate Cadwell to East Springfield (5002) 115kV line | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1109 | MA | National Grid, USA | | 12/2011 | NEEWS (Rhode Island Reliability Project) | South Wrentham 115kv terminal equipment upgrades | Planned | Under Construction | 9/24/2008 | No | \$1,000,000 | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 790 | MA | National Grid, USA | | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Berry Street 345/115 kV substation. | Under Construction | Under Construction | 4/25/2008 | No | \$52,000,000 | \$52,000,000 | \$52,000,000 |
| Reliability Upgrade | 1a | 1098 | MA | National Grid, USA | | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | 345/115kV line interconnections at Berry Street | Under Construction | Under Construction | 4/25/2008 | No | \$22,000,000 | \$22,000,000 | \$22,000,000 |
| Reliability Upgrade | 1a | 1092 | MA | Northeast Utilities | | 12/2013 | Agawam (BPS) | Upgrade the Agawam 115kV. Substations to BPS standards together with other misc. substation upgrades | Under Construction | Under Construction | 9/24/2008 | No | \$13,600,000 | \$12,100,000 | \$12,100,000 |
| Reliability Upgrade | 1a | 1216 | MA | Northeast Utilities | | 04/2012 | | 345kV Ludlow - Northfield (portion of 354) Line Structure replacements | Under Construction | Under Construction | NR | No | \$17,000,000 | \$25,100,000 | \$25,100,000 |
| Reliability Upgrade | 1a | 1266 | MA | Northeast Utilities | | 12/2011 | | 115kV Pleasant to Blandford (portion of 1421) Line structure replacement | Under Construction | Under Construction | NR | No | | \$9,960,000 | \$9,960,000 |
| Reliability Upgrade | 1a | 1267 | MA | Northeast Utilities | | 12/2011 | | 115kV Blandford to Southwick (portion of 1512) Line structure replacement | Under Construction | Under Construction | NR | No | | \$9,600,000 | \$9,600,000 |
| Reliability Upgrade | 1a | 969 | MA | NSTAR Electric Company | | 11/2012 | Greater Boston - North | Add a new 115kV 36.7 MVAR capacitor bank at Chelsea. | Planned | Under Construction | 3/30/2011 | NR | \$1,500,000 | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 301 | MA | NSTAR Electric Company | | 12/2011 | Greater Boston - Central | Reconductor 115-kV circuits 320-507 and 320-508. (Lexington - Waltham) | Concept | Under Construction | 2/15/2011 | No | \$8,400,000 | \$9,600,000 | \$9,600,000 |
| Reliability Upgrade | 1a | 1066 | MA | NSTAR Electric Company | | 12/2011 | NPCC BPS Compliance | Needham Station | Under Construction | Under Construction | NR | No | \$6,500,000 | \$8,000,000 | \$8,000,000 |
| Reliability Upgrade | 1a | 1065 | MA | NSTAR Electric Company | | 07/2012 | NPCC BPS Compliance | Waltham Station | Under Construction | Under Construction | NR | No | \$14,700,000 | \$14,700,000 | \$14,700,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Projected In-Service Month/Year | Major Project | Project | Jun-11 Status | Oct-11 Status | PPA (I.3.9) Approval | TCA Approval | Jun-11 Estimated PTF Costs | Oct-11 Estimated PTF Costs |
|---------------------|-------|------------|-------|-----------------------------|--------------------------|---------------------------------|--|--|--------------------|--------------------|-----------------------|--------------|---|---|
| Reliability Upgrade | 1a | 484 | RI | National Grid, USA | | 11/2011 | Greater Rhode Island Transmission Reinforcements 1 | Add (1) new 115 kV breaker at Woonsocket. | Planned | Under Construction | 4/25/2008 | No | \$580,000 | \$580,000 |
| Reliability Upgrade | 1a | 1193 | CT | United Illuminating Company | | 12/2012 | | North Haven 115kV Capacitor Bank TRV Mitigation Project | Under Construction | Under Construction | NR | NR | \$5,100,000 | \$4,900,000 |
| Reliability Upgrade | 1a | 974 | CT | United Illuminating Company | | 05/2013 | | East Shore 115 kV Oil Circuit Breaker & Disconnect Replacements. | Under Construction | Under Construction | NR | No | \$16,900,000 | \$16,900,000 |
| Reliability Upgrade | 1a | 816 | CT | Northeast Utilities | | 12/2013 | NEEWS (Greater Springfield Reliability Project) | North Bloomfield 2A Substation Expansion - add a second 345/115-kV autotransformer | Planned | Under Construction | 9/24/2008 | No | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1056 | CT | Northeast Utilities | | 12/2011 | LSP - Sherwood Substation | Sherwood Substation - add a 115/13.8-kV substation with two transformers and a 115-kV circuit breaker. | Under Construction | Under Construction | 12/12/2008 | 4/14/2011 | \$10,969,000 | \$10,969,000 |
| Reliability Upgrade | 1a | 1111 | CT | United Illuminating Company | | 01/2012 | | Union Avenue 115/26.4 kV Substation | Under Construction | Under Construction | 1/7/2009 | 11/10/2009 | \$10,543,000 | \$13,500,000 |
| Reliability Upgrade | 1a | 976 | CT | United Illuminating Company | | 05/2012 | | Grand Avenue 115 kV Switching Station Rebuild. | Under Construction | Under Construction | 1/7/2009 & 11/22/2010 | No | \$70,000,000 | \$70,000,000 |
| Reliability Upgrade | 1a | 1050 | CT | United Illuminating Company | | 12/2011 | | Devon Tie 115kV Switching Station BPS Compliance | Under Construction | Under Construction | NR | NR | \$4,000,000 | \$4,000,000 |

| |
|---|
| \$580,000 |
| \$4,900,000 |
| \$16,900,000 |
| Part of NEEWS (Greater Springfield Reliability Project) |
| \$10,969,000 |
| \$13,500,000 |
| \$70,000,000 |
| \$4,000,000 |
| \$5,460,853,715 |

| | | | | |
|---|-----------------|-----|-----------------|-----------------|
| 58 UnderConstruction -10% 10% | | | | |
| 58 \$1,925,903,262 \$1,733,312,936 \$2,118,493,588 | | | | |
| Total w/ Concept | \$5,460,853,715 | 247 | \$4,416,600,776 | \$2,118,493,588 |
| Total w/o Concept | \$5,332,553,715 | 207 | \$4,288,300,776 | \$5,348,690,245 |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-------------------------------|---------------------------------|---|---|--------------------|---|---|
| Reliability Upgrade | 1a | 1197 | ME | Bangor Hydro-Electric Company | 12/2013 | Keene Rd Autotransformer | Orrington 345kV Series Breaker Addition | Planned | \$1,761,250 | \$1,761,250 |
| Reliability Upgrade | 1a | 1116 | ME | Bangor Hydro-Electric Company | 12/2011 | Maine Power Reliability Program (MPRP) | L 64 Rebuild | Under Construction | \$37,626,000 | \$37,626,000 |
| Reliability Upgrade | 1a | 1156 | ME | Bangor Hydro-Electric Company | 12/2011 | Maine Power Reliability Program (MPRP) | Orrington Shunt Cap Reconfiguration | Under Construction | \$2,260,262 | \$2,260,262 |
| Reliability Upgrade | 1a | 905 | ME | Central Maine Power Company | 8/2014 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Orrington-Albion Rd-Coopers Mills, Coopers Mills-Larrabee Road, Larrabee Road-Surowiec). | Under Construction | \$1,364,108,000 | \$1,364,108,000 |
| Reliability Upgrade | 1a | 906 | ME | Central Maine Power Company | 05/2014 | Maine Power Reliability Program (MPRP) | New 115kV line construction (Orrington-Coopers Mills, Larrabee Road-Middle St-Middle St-Lewiston Lower, Larrabee Road-Livermore Falls, Livermore Falls-Rumford IP) | Under Construction | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 907 | ME | Central Maine Power Company | 05/2014 | Maine Power Reliability Program (MPRP) | Rebuild Existing 115kV lines: Sections 86 (Bucksport-Belfast), Section 203 (Detroit-Orrington), Sections 60 & 212 (Coopers Mills-Bowman St-Larrabee Road), Sections 89 & 229 (Livermore Falls-Riley-Rumford IP) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 908 | ME | Central Maine Power Company | 07/2014 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Albion Road, Larrabee Road); Coopers Mills autotransformer replaces Maxcy's autotransformer | Under Construction | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 909 | ME | Central Maine Power Company | 8/2014 | Maine Power Reliability Program (MPRP) | Add 2-115kV breakers & rebuild 86A, new .25 mile transmission at Belfast forming Sections 86 & 266 | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1025 | ME | Central Maine Power Company | 05/2014 | Maine Power Reliability Program (MPRP) | Separation of Double Circuit Towers (345kV Kennebec River Crossing 375/377, 115kV Bucksport 65/205) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1026 | ME | Central Maine Power Company | 12/2013 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction associated with (Surowiec-Raven Farm, South Gorham-Maguire Road, Maguire Road-Elliott Switching Station) line work | Planned | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M | \$36,000,000 |
| Reliability Upgrade | 1a | 1028 | ME | Central Maine Power Company | 12/2013 | Maine Power Reliability Program (MPRP) | Rebuild existing 115kV Line (Section 250, Maguire Rd-Three Rivers) | Planned | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M |
| Reliability Upgrade | 1a | 1158 | ME | Central Maine Power Company | 07/2014 | Maine Power Reliability Program (MPRP) | Two 40 MVAR reactors at Albion Road, two 40 MVAR reactors at Larabee Road, two 40 MVAR at Coopers Mills | Under Construction | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1030 | ME | Central Maine Power Company | 11/2013 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Maguire Road) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1132 | ME | Central Maine Power Company | 8/2014 | Maine Power Reliability Program (MPRP) | Add 115/34kV transformer at Coopers Mills | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 143 | ME | Bangor Hydro-Electric Company | 12/2012 | Down East Reliability Improvement | Contract 115 kV from Trenton tap (part of Hancock Reliability Project) to new Tunk Lake Substation (2 new breakers) to Harrington Substation to Epping Substation (3 new breakers) | Under Construction | \$66,100,000 | \$66,100,000 |
| Reliability Upgrade | 1a | 1129 | ME | Central Maine Power Company | 05/2012 | | New 115kV line between Wyman Hydro and Rice Rips Tap, parallel to exiting Section 63. Install a 115kV circuit breaker at Wyman Hydro termination | Planned | \$32,800,000 | \$32,800,000 |
| Reliability Upgrade | 1a | 1131 | ME | Central Maine Power Company | 11/2011 | CMP-LSP Bowman St. Substation | Add 115/34kV transformer | Under Construction | \$600,000 | \$600,000 |
| Reliability Upgrade | 1a | 1135 | ME | Central Maine Power Company | 02/2012 | CMP-Athens Substation LSP | Add two 115kV circuit breakers on Section 66; and 115/12kV transformer | Planned | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 1196 | ME | Bangor Hydro-Electric Company | 01/2012 | SVC Filter Upgrade (Part of Keene Rd Auto-transformer ID 144) | Upgrade of filter bank at Chester SVC facility | Under Construction | \$3,500,000 | \$3,500,000 |
| Reliability Upgrade | 1a | 1184 | ME | Central Maine Power Company | 05/2012 | Starks Switching Station | Add 4-115kV circuit breakers in a breaker-and a-half configuration on Section 63 and 2-18 MVAR cap banks at a new Starks Switching Station | Planned | \$9,750,000 | \$9,750,000 |
| Reliability Upgrade | 1a | 1251 | ME | Central Maine Power Company | 12/2012 | Lakewood Substation Expansion | Sectionalize Section 241 by adding four 115kV circuit breakers at Lakewood Substation and install a second 115/34.5 kV transformer | Planned | \$13,700,000 | \$13,700,000 |
| Reliability Upgrade | 1a | 1219 | NH | Northeast Utilities | 12/2011 | | Install 115kV two 13.3 MVAR capacitor banks at Oak Hill substation | Under Construction | \$4,000,000 | \$4,000,000 |
| Reliability Upgrade | 1a | 277 | NH | Northeast Utilities | 11/2011 | 2nd Deerfield 345/115kV Autotransformer Project | Add 2nd 345/115 kV autotransformer and 3-345kV breakers at Deerfield substation. | Under Construction | \$52,000,000 | \$52,000,000 |
| Reliability Upgrade | 1a | 1140 | NH | Northeast Utilities | 10/2011 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV C129 Line | Under Construction | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1141 | NH | Northeast Utilities | 2015 | 2nd Deerfield 345/115kV Autotransformer Project | Rochester Substation Upgrades | Planned | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1182 | NH | Northeast Utilities | 06/2012 | LSP New Eagle Substation and 115/34.5kV transformer | New 115kV Eagle Substation connected to 115/34.5kV Thornton Substation | Under Construction | \$22,800,000 | \$22,800,000 |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|--------------------------------|---------------------------------|-----------------------------|---|---------------|----------------------------|--------------|
| Reliability Upgrade | 1a | 680 | NH | National Grid, USA | 06/2013 | | Rebuild Bellows Falls Substation and install 115 kV capacitor bank. | Planned | \$7,393,000 | \$7,393,000 |
| Reliability Upgrade | 1a | 674 | NH | National Grid, USA | 12/2013 | | Replace Comerford 230 kV breakers and add (1) 230 kV bus tie breaker. | Planned | \$19,460,000 | \$19,460,000 |
| Reliability Upgrade | 1a | 1172 | VT | Vermont Electric Power Company | 06/2012 | Vermont Shunt Reactors | Install 345kV 60 MVAR shunt reactors (two at Coolidge and one at New Haven and relocate the New Haven reactor to Vernon) to address high voltage concerns | Planned | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 318 | VT | Vermont Electric Power Company | 12/2012 | Georgia Substation Rebuild | Rebuild the existing Georgia substation 115 kV bus into a ring bus to address reliability problems due to breaker failure contingencies | Planned | \$16,000,000 | \$16,000,000 |
| Reliability Upgrade | 1a | 1169 | VT | Vermont Electric Power Company | 12/2012 | Ascutney Substation Rebuild | Rebuild the existing Ascutney substation 115kV bus into a ring bus, to address reliability problems due to breaker failure contingencies | Planned | \$14,500,000 | \$14,500,000 |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|--------------------------------|---------------------------------|--|--|--------------------|------------------------------|------------------------------|
| Reliability Upgrade | 1a | 1170 | VT | Vermont Electric Power Company | 06/2013 | Bennington Substation Rebuild | Rebuild the exiting Bennington substation 115kV bus into a ring bus to address reliability problems due to breaker failure contingencies | Planned | \$28,000,000 | \$28,000,000 |
| Reliability Upgrade | 1a | 1171 | VT | Vermont Electric Power Company | 12/2011 | West Rutland Capacitor Rebuild | Install two 115kV 25 MVA capacitor banks at West Rutland to address low voltage concerns | Planned | \$2,400,000 | \$2,400,000 |
| Reliability Upgrade | 1a | 1194 | VT | Vermont Electric Power Company | 12/2012 | LSP Jay Substation | Construct a new 4-breaker ring substation at Jay with two 115/46kV transformers | Planned | \$6,500,000 | \$6,500,000 |
| Reliability Upgrade | 1a | 1195 | VT | Vermont Electric Power Company | 03/2013 | Highgate Refurbishment | Replace Highgate controls and cooling system | Planned | \$35,600,000 | \$35,600,000 |
| Reliability Upgrade | 1a | 887 | MA | National Grid, USA | 06/2013 | Auburn Area Transmission System Upgrades | Expand Auburn St substation to include 2nd 345/115 kV autotransformer and 345 kV ring bus. | Under Construction | \$58,000,000 | \$58,000,000 |
| Reliability Upgrade | 1a | 921 | MA | National Grid, USA | 12/2012 | Auburn Area Transmission System Upgrades | Bridgewater substation - Upgrade Bus work and convert to BPS substation. | Planned | \$40,000,000 | \$40,000,000 |
| Reliability Upgrade | 1a | 919 | MA | National Grid, USA | 04/2014 | Auburn Area Transmission System Upgrades | Dupont substation - Upgrade Buswork and convert to BPS substation. | Planned | \$13,600,000 | \$13,600,000 |
| Reliability Upgrade | 1a | 59 | MA | National Grid, USA | 12/2012 | Auburn Reliability Transmission System Upgrades | G18, F19 line terminals 115kV upgrades at Bridgewater sub | Planned | Part of RSP 921 | Part of RSP 921 |
| Reliability Upgrade | 1a | 840 | MA | NSTAR Electric Company | 12/2012 | Merrimack Valley/North Shore Reliability Project | Upgrade the 115 kV line (Line 423-515) from Mystic-Everett by adding a new parallel cable to the existing 115 kV cable. (NSTAR portion only) | Planned | \$5,900,000 | \$5,900,000 |
| Reliability Upgrade | 1a | 776 | MA | National Grid, USA | 11/2012 | Merrimack Valley/North Shore Reliability Project | Re-conductor O-167 (NGRID portion of Mystic - Everett) 115 kV line. | Planned | \$3,125,000 | \$3,125,000 |
| Reliability Upgrade | 1a | 782 | MA | National Grid, USA | 01/2016 | Merrimack Valley/North Shore Reliability Project | Replace existing S145/T146 UG cables with higher capacity cables between Salem Harbor and Railway. | Planned | \$43,912,000 | \$43,912,000 |
| Reliability Upgrade | 1a | 1165 | MA | NSTAR Electric Company | 12/2011 | Mystic Breaker Additions Project | Move Transformer 110B Connection at Mystic | Under Construction | \$2,600,000 | \$2,600,000 |
| Reliability Upgrade | 1a | 1068 | MA | NSTAR Electric Company | 12/2012 | Long Term Lower SEMA Upgrades | Install a new 345kV line from Carver to vicinity of Bourne and connect to existing #120 line and install a 345KV - 115kV auto-transformer at new substation about 3 miles west of the Barnstable Substation Loop Line #115 in and out of the new Substation. Create a new line position at the Bourne Substation and connect the Bourne-Canal section of Line #120 | Planned | \$106,500,000 | \$106,500,000 |
| Reliability Upgrade | 1a | 592 | MA | NSTAR Electric Company | 12/2012 | Long Term Lower SEMA Upgrades | Separate existing 345kV double circuit Cape Cod Canal crossing. The lines being separated are 322 (Canal-Carver) and 342 (Canal-Pilgrim-Auburn) | Planned | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1a | 1118 | MA | National Grid, USA | 12/2012 | Long Term Lower SEMA Upgrades | Upgrade 115kV line D21 (Bellrock-High Hill) | Planned | \$6,000,000 | \$6,000,000 |
| Reliability Upgrade | 1a | 1187 | MA | National Grid, USA | 06/2014 | A127/B128 Conductor Refurbishment | A127/B128 Conductor Refurbishment - Tower 510 to Harriman Substation, VT | Planned | \$65,000,000 | \$65,000,000 |
| Reliability Upgrade | 1a | 929 | MA | National Grid, USA | 09/2013 | Central/Western Massachusetts Upgrades | Searsburg - install in-line 69 kV breaker for operational flexibility. | Planned | \$2,500,000 | \$2,500,000 |
| Reliability Upgrade | 1a | 931 | MA | National Grid, USA | 01/2013 | Central/Western Massachusetts Upgrades | Park St. - incremental cost of designing for 115 kV instead of 69 kV. | Planned | \$531,481 | \$531,481 |
| Reliability Upgrade | 1a | 928 | MA | National Grid, USA | 06/2013 | Central/Western Massachusetts Upgrades | Millbury -upgrade terminal equipment for O-141, P-142, B-128, A-127 circuit breakers. | Planned | \$3,400,000 | \$3,400,000 |
| Reliability Upgrade | 1a | 934 | MA | National Grid, USA | 12/2012 | Central/Western Massachusetts Upgrades | Reconductor #2 Tap from Tower 510 - Webster St. 115 kV circuit. | Under Construction | Part of RSP 935 | Part of RSP 935 |
| Reliability Upgrade | 1a | 935 | MA | National Grid, USA | 12/2012 | Central/Western Massachusetts Upgrades | Reconductor from (A-127E/B-128E) Millbury - Tower 510 115 kV line. | Under Construction | \$10,200,000 | \$10,200,000 |
| Reliability Upgrade | 1a | 938 | MA | National Grid, USA | 05/2013 | Central/Western Massachusetts Upgrades | Deerfield - install a new 115/69kV autotransformer and a 69kV breaker and disconnect switches. | Planned | \$5,430,000 | \$5,430,000 |
| Reliability Upgrade | 1a | 940 | MA | National Grid, USA | 06/2014 | Central/Western Massachusetts Upgrades | Reconductor sections of A127W line w/795 ACSS (A127 West reconductoring. Tower 510 to Paxton, French King to French King). | Planned | \$18,000,000 | \$18,000,000 |
| Reliability Upgrade | 1a | 942 | MA | National Grid, USA | 12/2012 | Central/Western Massachusetts Upgrades | Webster St. - add two 115 kV circuit breakers. | Planned | \$3,650,000 | \$3,650,000 |
| Reliability Upgrade | 1a | 925 | MA | National Grid, USA | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - supply 13 kV from T3 and T4. | Planned | Part of RSP 926 | Part of RSP 926 |
| Reliability Upgrade | 1a | 926 | MA | National Grid, USA | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - replace T8 autotransformer with 230 kV 333 MVA, upgrade breaker and bus to 115 kV. Install high side 230 kV breaker. | Planned | \$14,700,000 | \$14,700,000 |
| Reliability Upgrade | 1a | 932 | MA | National Grid, USA | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - increase thermal rating of I-135 and J-136 buswork. | Planned | Part of RSP 926 | Part of RSP 926 |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-------------------------|---------------------------------|---|---|--------------------|---|---|
| Reliability Upgrade | 1a | 941 | MA | National Grid, USA | 8/2013 | Central/Western Massachusetts Upgrades | Install new Z126 Millbury - Tower #510 115 kV line. | Planned | \$13,748,000 | \$13,748,000 |
| Reliability Upgrade | 1a | 943 | MA | National Grid, USA | 12/2012 | Central/Western Massachusetts Upgrades | Millbury - new 115 kV breaker position for new line to Twr 510. | Planned | \$4,100,000 | \$4,100,000 |
| Reliability Upgrade | 1a | 944 | MA | National Grid, USA | 03/2012 | Central/Western Massachusetts Upgrades | Wachusett - install one 345 kV, 448 mVA transformer, one 345 kV breaker, and one 115 kV breaker. | Under Construction | \$15,700,000 | \$15,700,000 |
| Reliability Upgrade | 1a | 950 | MA | National Grid, USA | 02/2015 | Central/Western Massachusetts Upgrades | E Winchendon - install 115 kV breaker and 115 kV disconnect switch. | Planned | \$1,016,897 | \$1,016,897 |
| Reliability Upgrade | 1a | 953 | MA | National Grid, USA | 02/2015 | Central/Western Massachusetts Upgrades | Otter River - expand substation into 6-breaker ring bus with four 115 kV breakers and install two transformers. | Planned | \$10,248,067 | \$10,248,067 |
| Reliability Upgrade | 1a | 954 | MA | National Grid, USA | 02/2015 | Central/Western Massachusetts Upgrades | Westminster - install new 69kV breaker, including disconnect switches. | Planned | \$903,909 | \$903,909 |
| Reliability Upgrade | 1a | 945 | MA | National Grid, USA | 05/2014 | Central/Western Massachusetts Upgrades | Adams - install two new 115 kV breakers and replace two existing 115kV breakers | Planned | \$5,000,000 | \$5,000,000 |
| Reliability Upgrade | 1a | 946 | MA | National Grid, USA | 04/2015 | Central/Western Massachusetts Upgrades | Convert 69 kV (O-15S) Palmer- Hampden to 115 kV. | Planned | \$16,000,000 | \$16,000,000 |
| Reliability Upgrade | 1a | 948 | MA | National Grid, USA | 05/2014 | Central/Western Massachusetts Upgrades | Hampden - build new 115 kV substation at 1515/O-15S intersection (4 breaker ring). | Planned | \$13,400,000 | \$13,400,000 |
| Reliability Upgrade | 1a | 949 | MA | National Grid, USA | 04/2015 | Central/Western Massachusetts Upgrades | Palmer - add 115 kV breaker position for O15S conversion, includes thermal upgrade of W-175 bay. | Planned | \$1,600,000 | \$1,600,000 |
| Reliability Upgrade | 1a | 937 | MA | National Grid, USA | 12/2015 | Central/Western Massachusetts Upgrades | Bear Swamp - install one 230-115 kV 333 mVA auto, one 115 kV breaker and upgrade various terminal equipment. | Planned | \$6,602,875 | \$6,602,875 |
| Reliability Upgrade | 1a | 955 | MA | National Grid, USA | 10/2012 | Central/Western Massachusetts Upgrades | Reconductor (W175) W Charlton - Little Rest - Palmer w/1590 ACSR. | Planned | \$13,800,000 | \$13,800,000 |
| Reliability Upgrade | 1a | 951 | MA | National Grid, USA | 01/2014 | Central/Western Massachusetts Upgrades | Install new Otter River - E Winchendon (H-134) 115 kV line. | Planned | \$7,455,440 | \$7,455,440 |
| Reliability Upgrade | 1a | 1217 | MA | Northeast Utilities | 12/2012 | Central/Western Massachusetts Upgrades | Substation work at Ludlow (MA) and Scitico (CT) associated with the new Hampden (MA) substation project (Ngrid) | Planned | \$3,140,000 | \$3,140,000 |
| Reliability Upgrade | 1a | 1076 | MA | Northeast Utilities | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1311) 115kV line | Under Construction | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 687 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Fairmont 16H Substation Expansion | Planned | \$718,000,000 | \$718,000,000 |
| Reliability Upgrade | 1a | 826 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | South Agawam 42E Substation Reconfigure | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 196 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line (3216), Agawam (MA) - North Bloomfield (CT) | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 818 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reconstruct the 115kV line South Agawam to Southwick (1768) | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 819 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line Ludlow - Agawam (3196) | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 820 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Expansion of Agawam 16C 115 kV Substation to include new 345 kV station with two 345/115-kV autotransformers. | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 823 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Ludlow 19S 345 kV Substation Expansion, two 345/115kV Autotransformers replacements. Add two 345kV 120 MVar Capacitor additions | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 828 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Breckwood 115kV circuit 1322 Reactor Bypass and Open Breckwood Substation 1T breaker and maintain breaker in the normally open position | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 829 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Piper (1230) 115 kV line. | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1010 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build 115-kV Cadwell switching 50F station. | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 259 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to Orchard (1426) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 688 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Cadwell (1481) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1100 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Chicopee (1314) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1101 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Orchard (1552) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1102 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Piper (1601) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-------------------------|---------------------------------|---|---|--------------------|---|---|
| Reliability Upgrade | 1a | 1103 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Chicopee (1602) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1104 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Cadwell (1603) 115kV line and add 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1105 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Shawinigan (1604) 115kV line and add a 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1070 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1781) 115kV line and add a 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1071 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1782) 115kV line and add a 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1072 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Shawinigan (1845) 115kV line and add 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1073 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reterminate Cadwell to East Springfield (5001) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1074 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reterminate Cadwell to East Springfield (5002) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1075 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add 2nd high speed protection scheme to Agawam to Elm (1007) 115kV line if the Russell Biomass Plant, queue position #135 is constructed | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1078 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Pinshed (1327) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1079 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Mt. Tom (1428) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1080 | MA | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Replace 4T and 6T 115kV circuit breaker to Shawinigan substation | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1109 | MA | National Grid, USA | 12/2011 | NEEWS (Rhode Island Reliability Project) | South Wrentham 115kv terminal equipment upgrades | Under Construction | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 1094 | MA | National Grid, USA | 12/2015 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV Milbury Substation equipment | Planned | \$25,000,000 | \$25,000,000 |
| Reliability Upgrade | 1a | 1202 | MA | NSTAR Electric Company | 06/2013 | NEEWS (Ancillary Interstate Reliability Project) | Rebuild 1.2 mile length of line 336 with 2-900 ACSS conductor and replace 5, 345kV 2000 amp disconnect switches with 3000 amp switches at W. Medway station | Planned | \$1,700,000 | \$1,700,000 |
| Reliability Upgrade | 1a | 791 | MA | National Grid, USA | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | New 115 kV circuit between Somerset and Brayton Point. | Planned | \$11,560,000 | \$11,560,000 |
| Reliability Upgrade | 1a | 913 | MA | National Grid, USA | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Brayton Point substation reinforcements to accommodate the new 115 kV line. | Planned | \$3,250,000 | \$3,250,000 |
| Reliability Upgrade | 1a | 914 | MA | National Grid, USA | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | New third circuit between Somerset and Bell Rock. | Planned | \$28,150,000 | \$28,150,000 |
| Reliability Upgrade | 1a | 917 | MA | National Grid, USA | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Bell Rock substation expansion. | Planned | \$7,000,000 | \$7,000,000 |
| Reliability Upgrade | 1a | 793 | MA | National Grid, USA | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Somerset substation reinforcements. | Planned | \$6,400,000 | \$6,400,000 |
| Reliability Upgrade | 1a | 790 | MA | National Grid, USA | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Berry Street 345/115 kV substation. | Under Construction | \$52,000,000 | \$52,000,000 |
| Reliability Upgrade | 1a | 1098 | MA | National Grid, USA | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | 345/115kV line interconnections at Berry Street | Under Construction | \$22,000,000 | \$22,000,000 |
| Reliability Upgrade | 1a | 1092 | MA | Northeast Utilities | 12/2013 | Agawam (BPS) | Upgrade the Agawam 115kV. Substations to BPS standards together with other misc. substation upgrades | Under Construction | \$12,100,000 | \$12,100,000 |
| Reliability Upgrade | 1a | 1216 | MA | Northeast Utilities | 04/2012 | | 345kV Ludlow - Northfield (portion of 354) Line Structure replacements | Under Construction | \$25,100,000 | \$25,100,000 |
| Reliability Upgrade | 1a | 1266 | MA | Northeast Utilities | 12/2011 | | 115kV Pleasant to Blandford (portion of 1421) Line structure replacement | Under Construction | \$9,960,000 | \$9,960,000 |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-------------------------|---------------------------------|---|---|--------------------|----------------------------|---------------|
| Reliability Upgrade | 1a | 1267 | MA | Northeast Utilities | 12/2011 | | 115kV Blandford to Southwick (portion of 1512) Line structure replacement | Under Construction | \$9,600,000 | \$9,600,000 |
| Reliability Upgrade | 1a | 1268 | MA | Northeast Utilities | 12/2012 | | 345kV Northfield Mountain to Berkshire (portion of 312) line structure replacements | Planned | \$7,900,000 | \$7,900,000 |
| Reliability Upgrade | 1a | 673 | MA | National Grid, USA | 12/2012 | Worcester Area Reinforcements | Add new 115kV bay to separate the M-165 & E-157 terminal at Millbury #2 Substation | Planned | \$2,200,000 | \$2,200,000 |
| Reliability Upgrade | 1a | 676 | MA | National Grid, USA | 12/2012 | Worcester Area Reinforcements | New Bloomingdale to Vernon Hill 115 kV (UG Cable-3.6 mi.) new 115kV breaker at Bloomingdale & Vernon Hill | Planned | \$30,000,000 | \$30,000,000 |
| Reliability Upgrade | 1a | 1257 | MA | National Grid, USA | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the S-145/T-146 from Tewksbury-North Reading Tap (9.3 miles each) | Planned | \$29,000,000 | \$29,000,000 |
| Reliability Upgrade | 1a | 1258 | MA | National Grid, USA | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the Y-151 from Tewksbury Junction - West Methuen (8.2 miles) | Planned | \$11,500,000 | \$11,500,000 |
| Reliability Upgrade | 1a | 1259 | MA | National Grid, USA | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the B154/C-155N from King St Tap - South Danvers (14.5 miles each way) | Planned | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 969 | MA | NSTAR Electric Company | 11/2012 | Greater Boston - North | Add a new 115kV 36.7 MVAR capacitor bank at Chelsea. | Under Construction | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 1201 | MA | NSTAR Electric Company | 12/2012 | Greater Boston - North | 115kV line Reconductoring of the P168/128-518 Line between Chelsea and Revere (NSTAR Portion of the line) | Planned | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 301 | MA | NSTAR Electric Company | 12/2011 | Greater Boston - Central | Reconductor 115-kV circuits 320-507 and 320-508. (Lexington - Waltham) | Under Construction | \$9,600,000 | \$9,600,000 |
| Reliability Upgrade | 1a | 1066 | MA | NSTAR Electric Company | 12/2011 | NPCC BPS Compliance | Needham Station | Under Construction | \$8,000,000 | \$8,000,000 |
| Reliability Upgrade | 1a | 1065 | MA | NSTAR Electric Company | 07/2012 | NPCC BPS Compliance | Waltham Station | Under Construction | \$14,700,000 | \$14,700,000 |
| Reliability Upgrade | 1a | 1168 | MA | Holyoke Gas & Electric | 12/2012 | North Canal 44P | Loop the 1525 (Holyoke Fairmont South 115kV) line into the new North Canal 44P | Planned | \$4,100,000 | \$4,100,000 |
| Reliability Upgrade | 1a | 1256 | MA | Unitil | 06/2013 | Flagg Pond Upgrades | At Flagg Pond Substation upgrade terminal equipment on the I-135N, I-135S, J-136N and J-136S 115kV lines and Zone 3 relay upgrades for the J-136N 115kV line. | Planned | \$2,750,000 | \$2,750,000 |
| Reliability Upgrade | 1a | 484 | RI | National Grid, USA | 11/2011 | Greater Rhode Island Transmission Reinforcements ¹ | Add (1) new 115 kV breaker at Woonsocket. | Under Construction | \$580,000 | \$580,000 |
| Reliability Upgrade | 1a | 915 | RI | National Grid, USA | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Reconductor M13 and L14 between Bell Rock and Dexter + Reconductor 69 kV lines 61 and 62. | Planned | \$19,450,000 | \$19,450,000 |
| Reliability Upgrade | 1a | 916 | RI | National Grid, USA | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Conversion of Jepson 69 kV substation to 115 kV substation. | Planned | \$11,800,000 | \$11,800,000 |
| Reliability Upgrade | 1a | 918 | RI | National Grid, USA | 12/2014 | Greater Rhode Island Transmission Reinforcements ¹ | Dexter substation changes. | Planned | \$3,180,000 | \$3,180,000 |
| Reliability Upgrade | 1a | 190 | RI | National Grid, USA | 12/2015 | NEEWS (Interstate Reliability Project) | New Millbury to West Farnum (366) 345kV line. | Planned | \$81,800,000 | \$81,800,000 |
| Reliability Upgrade | 1a | 1095 | RI | National Grid, USA | 12/2012 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV West Farnum Substation Equipment | Planned | \$73,800,000 | \$73,800,000 |
| Reliability Upgrade | 1a | 794 | RI | National Grid, USA | 12/2015 | NEEWS (Interstate Reliability Project) | New West Farnum to Connecticut/Rhode Island border (341) 345kV line (to Lake Road). | Planned | \$71,700,000 | \$71,700,000 |
| Reliability Upgrade | 1a | 795 | RI | National Grid, USA | 04/2013 | NEEWS (Rhode Island Reliability Project) | New Kent County to West Farnum 345kV (359) line. | Planned | \$69,000,000 | \$69,000,000 |
| Reliability Upgrade | 1a | 1106 | RI | National Grid, USA | 06/2012 | NEEWS (Rhode Island Reliability Project) | Kent County Substation Upgrades related to third 345/115 kV Autotransformer. | Planned | \$26,000,000 | \$26,000,000 |
| Reliability Upgrade | 1a | 798 | RI | National Grid, USA | 12/2011 | NEEWS (Rhode Island Reliability Project) | Upgrade of 115kV terminal equipment at Franklin Square. | Planned | \$600,000 | \$600,000 |
| Reliability Upgrade | 1a | 1096 | RI | National Grid, USA | 06/2012 | NEEWS (Rhode Island Reliability Project) | Drumrock substation: Terminal equipment upgrades, Protection modifications and upgrades to meet BPS standards | Planned | \$12,000,000 | \$12,000,000 |
| Reliability Upgrade | 1a | 1097 | RI | National Grid, USA | 01/2013 | NEEWS (Rhode Island Reliability Project) | Relocate and Rebuild 115kV lines in the same ROW associated with new 345kV line from W. Farnum to Kent County including S-175, T172N and T-172S with associated terminal equipment upgrade. | Planned | \$129,800,000 | \$129,800,000 |
| Reliability Upgrade | 1a | 1099 | RI | National Grid, USA | 06/2012 | NEEWS (Rhode Island Reliability Project) | Hartford Ave 115kV terminal equipment upgrades | Planned | \$6,000,000 | \$6,000,000 |
| Reliability Upgrade | 1a | 1253 | RI | National Grid, USA | 04/2015 | | New Crandall St. Substation 115-13 kV substation addition | Planned | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 1241 | RI | National Grid, USA | 06/2013 | | Re-conductor G-185S (Kent County - Davisville Tap) | Planned | \$4,200,000 | \$4,200,000 |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|-------------------------------|---------------------------------|---|---|--------------------|---|---|
| Reliability Upgrade | 1a | 1193 | CT | United Illuminating Company | 12/2012 | | North Haven 115kV Capacitor Bank TRV Mitigation Project | Under Construction | \$4,900,000 | \$4,900,000 |
| Reliability Upgrade | 1a | 974 | CT | United Illuminating Company | 05/2013 | | East Shore 115 kV Oil Circuit Breaker & Disconnect Replacements. | Under Construction | \$16,900,000 | \$16,900,000 |
| Reliability Upgrade | 1a | 816 | CT | Northeast Utilities | 12/2013 | NEEWS (Greater Springfield Reliability Project) | North Bloomfield 2A Substation Expansion - add a second 345/115-kV autotransformer | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1054 | CT | Northeast Utilities | 12/2013 | NEEWS (Ancillary Greater Springfield Reliability Project) | Build a new 345 kV line from Manchester to Meekville Junction and re-terminate the 395 line at Meekville Junction | Planned | \$28,800,000 | \$28,800,000 |
| Reliability Upgrade | 1a | 576 | CT | Northeast Utilities | 2016 | NEEWS (Central Connecticut Reliability Project) | Build new 345kV line (3208) North Bloomfield to Frost Bridge. | Planned | \$301,000,000 | \$301,000,000 |
| Reliability Upgrade | 1a | 1114 | CT | Northeast Utilities | 2016 | NEEWS (Central Connecticut Reliability Project) | Frost Bridge 18R substation expansion - add a 345/115kV autotransformer. | Planned | Part of NEEWS (Central Connecticut Reliability Project) | Part of NEEWS (Central Connecticut Reliability Project) |
| Reliability Upgrade | 1a | 802 | CT | Northeast Utilities | 2015 | NEEWS (Interstate Reliability Project) | Build new 345kV line (3271) Card to Lake Road | Planned | \$218,000,000 | \$218,000,000 |
| Reliability Upgrade | 1a | 1085 | CT | Northeast Utilities | 2015 | NEEWS (Interstate Reliability Project) | Card 11F substation expansion | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 810 | CT | Northeast Utilities | 2015 | NEEWS (Interstate Reliability Project) | Lake Road 27E 345 kV substation expansion | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 191 | CT | Northeast Utilities | 2015 | NEEWS (Interstate Reliability Project) | Build Lake Road to Connecticut/Rhode Island border (341) 345-kV line (to West Farnum). | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1235 | CT | Northeast Utilities | 12/2015 | NEEWS (Ancillary Interstate Reliability Project) | Sag elimination on 1410 Line (Montville-Buddington) | Planned | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 1245 | CT | CMEEC | 12/2015 | NEEWS (Ancillary Interstate Reliability Project) | Sag elimination on 1410 Line (Montville-Buddington) | Planned | \$60,000 | \$60,000 |
| Reliability Upgrade | 1a | 1227 | CT | Northeast Utilities | 2012 | LSP - Stamford Area | Add 4th transformer and build a five breaker ring bus at South End Substation | Planned | \$6,400,000 | \$6,400,000 |
| Reliability Upgrade | 1a | 1056 | CT | Northeast Utilities | 12/2011 | LSP - Sherwood Substation | Sherwood Substation - add a 115/13.8-kV substation with two transformers and a 115-kV circuit breaker. | Under Construction | \$10,969,000 | \$10,969,000 |
| Reliability Upgrade | 1a | 1218 | CT | Northeast Utilities | 12/2013 | Millstone 345kV Circuit Separation project & SLOD SPS System Retirement | Separate the 345kV Double Circuit Tower 310/348 and 371/383 Tower configuration | Planned | \$25,600,000 | \$25,600,000 |
| Reliability Upgrade | 1a | 1111 | CT | United Illuminating Company | 01/2012 | | Union Avenue 115/26.4 kV Substation | Under Construction | \$13,500,000 | \$13,500,000 |
| Reliability Upgrade | 1a | 976 | CT | United Illuminating Company | 05/2012 | | Grand Avenue 115 kV Switching Station Rebuild. | Under Construction | \$70,000,000 | \$70,000,000 |
| Reliability Upgrade | 1a | 721 | CT | United Illuminating Company | 06/2015 | | New Shelton 115/13.8 kV substation | Planned | \$19,500,000 | \$19,500,000 |
| Reliability Upgrade | 1a | 879 | CT | Bangor Hydro-Electric Company | TBD | Dynamic Swing Reorder Project | Upgrade 7 of 8 Dynamic Swing Recorders in New England to comply with NERC, NPCC, and ISO-NE Standards. | Planned | \$420,000 | \$420,000 |
| Reliability Upgrade | 1a | 1050 | CT | United Illuminating Company | 12/2011 | | Devon Tie 115kV Switching Station BPS Compliance | Under Construction | \$4,000,000 | \$4,000,000 |
| Reliability Upgrade | 1b | 1031 | ME | Bangor Hydro-Electric Company | 12/2013 | Maine Power Reliability Program (MPRP) | Rebel Hill Switching Station | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1154 | ME | Bangor Hydro-Electric Company | 12/2013 | Maine Power Reliability Program (MPRP) | Rerate Line 66 | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1155 | ME | Bangor Hydro-Electric Company | 12/2014 | Maine Power Reliability Program (MPRP) | Capacitor Bank Addition (10 MVAR at Trenton 34.5kV and Epping) | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1133 | ME | Central Maine Power Company | 12/2011 | CMP-LSP Leeds Substation | Add 115/34kV Leeds Substation and new 34kV line from Leeds to Turner | Proposed | \$300,000 | \$300,000 |
| Reliability Upgrade | 1b | 1279 | ME | Central Maine Power Company | 12/2014 | | New 345/115kV Autotransformer and 115kV switchyard at Raven Farm substation consisting of a four-bay breaker and a half configuration of eleven (11) breakers | Proposed | \$26,126,000 | \$26,126,000 |
| Reliability Upgrade | 1b | 1280 | ME | Central Maine Power Company | 12/2014 | | New 115kV line section 244 and upgraded line section 80 between Coopers Mill and Highland Substations | Proposed | \$62,735,000 | \$62,735,000 |
| Reliability Upgrade | 1b | 1183 | NH | Northeast Utilities | 2014 | LSP New Peaselee Substation and 115/34.5KV transformer | New 115kV Peaselee Substation and transmission line work | Proposed | \$12,400,000 | \$12,400,000 |
| Reliability Upgrade | 1b | 1220 | NH | Northeast Utilities | 12/2015 | Greater Boston - North | Install a new 345kV circuit between Scobie and Pelham NH (this is NU's portion of the new Scobie-Tewksbury circuit) | Proposed | \$40,100,000 | \$40,100,000 |
| Reliability Upgrade | 1b | 1269 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Amherst Substation - New 345kV breaker and three 25MVAR Capacitor Banks | Proposed | \$19,600,000 | \$19,600,000 |
| Reliability Upgrade | 1b | 1270 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | New 115kV line from Fitzwilliams to Monadnock | Proposed | \$10,500,000 | \$10,500,000 |
| Reliability Upgrade | 1b | 1271 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Upgrade the Keene to Monadnock (T198) 115kV line | Proposed | \$11,900,000 | \$11,900,000 |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|--------------------------------|---------------------------------|---------------------------------------|---|---------------|----------------------------|--------------|
| Reliability Upgrade | 1b | 1272 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Weare Substation - Add two 13.3 MVar 115V capacitors | Proposed | \$3,600,000 | \$3,600,000 |
| Reliability Upgrade | 1b | 1273 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Rebuild A152 115kV line | Proposed | \$22,500,000 | \$22,500,000 |
| Reliability Upgrade | 1b | 1274 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Rebuild N186 115kV line | Proposed | \$2,300,000 | \$2,300,000 |
| Reliability Upgrade | 1b | 1275 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Upgrade the 381 345kV line | Proposed | \$4,200,000 | \$4,200,000 |
| Reliability Upgrade | 1b | 1276 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Littleton Substation - Add a second 230/115kV autotransformer and associated 115kV substation work | Proposed | \$16,700,000 | \$16,700,000 |
| Reliability Upgrade | 1b | 1277 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Webster Substation - Add four 26.6 MVar 115kV capacitors | Proposed | \$11,900,000 | \$11,900,000 |
| Reliability Upgrade | 1b | 1278 | NH | Northeast Utilities | TBD | Western New Hampshire Solution | Saco Valley Substation - Add two 25 MVar dynamic Var devices | Proposed | \$15,800,000 | \$15,800,000 |
| Reliability Upgrade | 1b | 1263 | NH | National Grid, USA | TBD | Northern New Hampshire Solution | New C-203 230kV line tap to Littleton NH Substation associated with 2nd 230/115kV auto project | Proposed | \$1,100,000 | \$1,100,000 |
| Reliability Upgrade | 1b | 325 | VT | Vermont Electric Power Company | TBD | VELCO LSP - Chelsea Substation | Replace (2) SCADA controlled motorized disconnect switches with 115 kV circuit breakers at the existing Chelsea substation to maintain adequate supply to the load. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 324 | VT | Vermont Electric Power Company | TBD | | Granite to Middlesex 230-kV line with necessary substation upgrades to mitigate several reliability concerns, including those related to the potential Highgate contract termination. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 139 | VT | Vermont Electric Power Company | TBD | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 2: synchronous condensers expanded to +200/- 100 MVAR and two 25 MVAR capacitor banks. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1250 | VT | Vermont Electric Power Company | 2016 | VELCO LSP - West Rutland Substation | Installation of a 115/46kV transformer at West Rutland between breakers K30 and K34 | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 843 | MA | NSTAR Electric Company | 06/2012 | Boston Area 115 kV Enhancements | Install (2) new 115 kV breakers at Trapelo Road. | Proposed | \$3,450,000 | \$3,450,000 |
| Reliability Upgrade | 1b | 593 | MA | NSTAR Electric Company | 2013 | Mid Cape Reliability Project | Add a new 115 kV line from Bourne and Barnstable/Falmouth/equivalent | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 965 | MA | NSTAR Electric Company | 06/2014 | Greater Boston - South | Add third 115kV line from W. Walpole to Holbrook | Proposed | \$19,000,000 | \$19,000,000 |
| Reliability Upgrade | 1b | 1175 | MA | NSTAR Electric Company | 12/2013 | Greater Boston - South | Upgrade the 115kV line 201-501 (Medway-Depot St.) and the 201-502 (Beaver Pond - Depot Street Tap) to a higher capacity line | Proposed | \$3,700,000 | \$3,700,000 |
| Reliability Upgrade | 1b | 1214 | MA | National Grid, USA | 12/2015 | Greater Boston - South | Line Reconductoring of the C-129 Beaver Pond - Depot St. Tap) and D-130 (Depot St. Tap - Medway) 115kV lines | Proposed | \$500,000 | \$500,000 |
| Reliability Upgrade | 1b | 1177 | MA | NSTAR Electric Company | 12/2015 | Greater Boston - North | Reconductor 211-503/504 from North Woburn Tap to Reading | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1178 | MA | NSTAR Electric Company | 12/2015 | Greater Boston - North | Install 115kV Capacitor Bank at North Woburn | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1179 | MA | NSTAR Electric Company | 12/2015 | Greater Boston - North | Install 2nd 345kV circuit between Bellerica/Burlington town line to Tewksbury | Proposed | \$33,000,000 | \$33,000,000 |
| Reliability Upgrade | 1b | 1190 | MA | NSTAR Electric Company | 12/2015 | Greater Boston - North | Install a second 345/115kV Auto Transformer at Woburn | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1200 | MA | NSTAR Electric Company | TBD | Greater Boston - North | Add a new 345kV UG circuit between Woburn and North Cambridge | Proposed | \$52,000,000 | \$52,000,000 |
| Reliability Upgrade | 1b | 1211 | MA | National Grid, USA | 12/2015 | Greater Boston - North | Install 2nd 345kV circuit between Tewksbury - Billerica/Burlington Town Line (NSTAR Border) | Proposed | \$32,700,000 | \$32,700,000 |
| Reliability Upgrade | 1b | 1212 | MA | National Grid, USA | 12/2015 | Greater Boston - North | 115kV Line Reconductoring of M-139/N-140 Tewksbury-Pinehurst (6.1 miles each) | Proposed | \$11,600,000 | \$11,600,000 |
| Reliability Upgrade | 1b | 1213 | MA | National Grid, USA | 12/2015 | Greater Boston - North | Install new 345kV circuit between NH/MA border and Tewksbury (this is NGRID's portion of the new Scobie-Tewksbury circuit) | Proposed | \$23,370,000 | \$23,370,000 |
| Reliability Upgrade | 1b | 1215 | MA | National Grid, USA | 12/2015 | Greater Boston - North | New 115kV line between Wakefield - Everett | Proposed | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1b | 1254 | MA | National Grid, USA | 12/2015 | Greater Boston - North | Substation work at Revere Substation to increase ratings on the 128-515P/168 line between Chelsea and Revere | Proposed | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1b | 1260 | MA | National Grid, USA | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the F-158N/S Wakefield Jct - Everett (7.36 miles) | Proposed | \$3,500,000 | \$3,500,000 |
| Reliability Upgrade | 1b | 1261 | MA | National Grid, USA | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the S-145T-146 from North Reading Tap - Wakefield Jct (5.1 miles each) | Proposed | \$10,800,000 | \$10,800,000 |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------|---|---------------------------------|--|--|---------------|---------------------------------------|---------------------------------------|
| Reliability Upgrade | 1b | 1262 | MA | National Grid, USA | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the Y-151 from Tewksbury Junction - Tewksbury Substation (1.6 miles) | Proposed | \$1,250,000 | \$1,250,000 |
| Reliability Upgrade | 1b | 970 | MA | NSTAR Electric Company | TBD | Greater Boston - Central | Add a new 345 kV line from Lexington to Waltham. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 971 | MA | NSTAR Electric Company | TBD | Greater Boston - Central | Add a new 345/230 kV auto at Waltham and 230 kV switching facilities. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1176 | MA | NSTAR Electric Company | TBD | Greater Boston - Central | Install an oil circulation pipe and heat exchangers at K Street and Chatham Street sections of 250-516/517 circuits | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1189 | MA | NSTAR Electric Company | 12/2015 | Greater Boston - Central | Install 3rd 115kV Circuit between Waltham and Brighton | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1198 | MA | NSTAR Electric Company | TBD | Greater Boston - Central | Add a second 115kV line from Woburn to Burlington | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1199 | MA | NSTAR Electric Company | TBD | Greater Boston - Central | Install a new 230/115kV auto transformer at Sudbury or equivalent | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1208 | MA | National Grid, USA | 12/2014 | Pittsfield / Greenfield Project | Separation and reconductoring of Cabot Taps (A-127 and Y-177 115kV lines) | Proposed | \$7,400,000 | \$7,400,000 |
| Reliability Upgrade | 1b | 1209 | MA | National Grid, USA | 12/2014 | Pittsfield / Greenfield Project | Reconductoring of A-127 between Erving and Cabot Tap with 1590 ACSS | Proposed | \$12,000,000 | \$12,000,000 |
| Reliability Upgrade | 1b | 1210 | MA | National Grid, USA | 12/2014 | Pittsfield / Greenfield Project | Harriman 115kV breaker upgrades | Proposed | \$1,100,000 | \$1,100,000 |
| Reliability Upgrade | 1b | 1221 | MA | Northeast Utilities | 11/2014 | Pittsfield / Greenfield Project | Modify Northfield Mountain 16R substation and install a 345/115kV autotransformer | Proposed | \$108,500,000 | \$108,500,000 |
| Reliability Upgrade | 1b | 1222 | MA | Northeast Utilities | 11/2014 | Pittsfield / Greenfield Project | Build a new 115kV three breaker Switching Station (Erving) ring bus | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1223 | MA | Northeast Utilities | 11/2014 | Pittsfield / Greenfield Project | Build a new 115kV line from Northfield Mountain to the new Erving Switching Station | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1224 | MA | Northeast Utilities | 11/2014 | Pittsfield / Greenfield Project | Install 115kV 14.4 MVAR capacitor banks at Cumberland, Podick and Amherst Substations | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1225 | MA | Northeast Utilities | 11/2014 | Pittsfield / Greenfield Project | Rebuild the Cumberland to Montague 1361 115kV line and terminal work at Cumberland and Montague | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1226 | MA | Northeast Utilities | 11/2014 | Pittsfield / Greenfield Project | Reconductor the Woodland to Pleasant 1371 115-kV line and terminal work at Woodland substation. | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 956 | MA | National Grid, USA | 01/2015 | Central/Western Massachusetts Upgrades | Carpenter Hill - replace one 345 kV, 448 MVA autotransformer and upgrade thermal rating of bus to at least 580 MVA. | Proposed | \$7,021,534 | \$7,021,534 |
| Reliability Upgrade | 1b | 1252 | MA | National Grid, USA | 12/2015 | NEEWS (Interstate Reliability Project) | Re-conductor 345kV 328 line (West Farnum-Sherman Rd) | Proposed | \$36,500,000 | \$36,500,000 |
| Reliability Upgrade | 1b | 1191 | MA | NSTAR Electric Company | 12/2012 | | Rebuild Section of Line 322 (Canal-Carver) | Concept | \$12,200,000 | \$12,200,000 |
| Reliability Upgrade | 1b | 1181 | MA | NSTAR Electric Company | 12/2013 | | Rebuild the High Hill 115kV Substation to a Breaker and a half design | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1204 | MA | NSTAR Electric Company | 06/2012 | | Rebuild the Mashpee Substation to a Ring Bus and install an overvoltage trip relay on the Mashpee 115kV Capacitor Bank | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1205 | MA | NSTAR Electric Company | 12/2013 | Mid-Cape Reliability Project | Separate 120 (Canal-Barnstable) /122 (Oak St-Barnstable) DCT | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1206 | MA | NSTAR Electric Company | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system resoration | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1247 | MA | NSTAR Electric Company | TBD | | Rebuild the Acushnet 115kV Substation | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1248 | MA | NSTAR Electric Company | 12/2014 | | Rebuild the Kingston Substation to a breaker and a half scheme | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1249 | MA | NSTAR Electric Company | 12/2013 | | Rebuild the Wareham Substation to a breaker and a half scheme | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1207 | MA | NSTAR Electric Company | 2012 | Belmont Transmission Interconnection | Build a new 115kV Substation for the Belmont Transmission Interconnection | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1255 | MA | CELD (Chicopee Electric Light Department) | 12/2013 | CELD 115/13.8kV Substation | 115/13.8kV substation on Memorial Dr. with two transformers and twelve feeders looped into 1904 (1723) line between Piper and Fairmont substations | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1233 | RI | National Grid, USA | 12/2015 | NEEWS (Interstate Reliability Project) | New Sherman Road 345kV AIS Substation | Proposed | \$36,600,000 | \$36,600,000 |
| Reliability Upgrade | 1b | 1234 | RI | National Grid, USA | 12/2015 | NEEWS (Interstate Reliability Project) | Install a 115kV redundant breaker in series with breaker #1713 at West Farnum Substation and upgrade to current BPS standards | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1084 | CT | Northeast Utilities | TBD | Greater Hartford Central Connecticut Project | Loop the Millstone - Manchester (310) 345 kV line into the Card substation ⁽²⁾ | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1086 | CT | Northeast Utilities | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to 115kV line 1704, SW Hartford to South Meadow ⁽²⁾ | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1087 | CT | Northeast Utilities | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to line 115kV 1722 SW Hartford NW Hartford ⁽²⁾ | Concept | TBD | TBD |

October 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | State | Primary Equipment Owner | | Projected In-Service Month/Year | Major Project | Project | Oct-11 Status | Oct-11 Estimated PTF Costs | |
|----------------------------|-------|------------|-------|-----------------------------|------|---------------------------------|---|--|---------------|---|---|
| Reliability Upgrade | 1b | 1088 | CT | Northeast Utilities | | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to 115kV line 1786, East Hartford to Riverside to South Meadow ⁽²⁾ | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 975 | CT | United Illuminating Company | | 06/2015 | | Pequonnock 115 kV Fault Duty Mitigation. | Concept | \$105,000,000 | \$105,000,000 |
| Reliability Upgrade | 1b | 699 | CT | United Illuminating Company | | 12/2014 | | Naugatuck Valley 115 kV reliability improvement. | Concept | \$11,100,000 | \$11,100,000 |
| Reliability Upgrade | 1b | 801 | CT | Northeast Utilities | | TBD | | Build Manchester to East Hartford 115-kV cable with a series reactor. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 85 | CT | Northeast Utilities | | TBD | | Upgrade the South Meadow Substation to Bulk Power System standards (BPS). | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1228 | CT | Northeast Utilities | | TBD | Stamford Area | Additional circuit into the Stamford Area (Glenbrook-South End) | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1229 | CT | Northeast Utilities | | TBD | | Replace 115kV 1990 (Frost Bridge-Stevenson) lattice structure | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1230 | CT | Northeast Utilities | | TBD | LSP - Greater Hartford Area | 115kV breaker addition at Northeast Simsbury Substation | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1242 | CT | CMEEC | | 10/2012 | SNEW 115kV substation | SNEW 115/13.8kV substation with two transformers and a 115kV circuit breaker looped into the 1890 line (between Norwalk Hbr - Ely Ave) | Proposed | \$2,000,000 | \$2,000,000 |
| Reliability Upgrade | 1b | 1243 | CT | CMEEC | | 10/2013 | TTD's Fitch St 115kV Substation | TTD 115/27kV substation with two transformers and a 115kV circuit breaker looped into 1416 line (between Compo and Darien substations) | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1244 | CT | CMEEC | | 10/2011 | 115kV Circuit Breaker Installation | Install 115kV Bus Tie Circuit Breaker at Stock House Rd Substation | Proposed | \$750,000 | \$750,000 |
| Reliability Upgrade | 1b | 1246 | CT | United Illuminating Company | | 09/2013 | 8300 Line Reconfiguration Project | Reconfiguration of 115kV (8300) line from Mill River to Quinipiac | Proposed | \$17,400,000 | \$17,400,000 |
| IN-SERVICE PROJECTS | | | | | | | | | | | \$5,460,853,715 |
| Reliability Upgrade | 1a | 582 | CT | Northeast Utilities | 2011 | 06/2011 | | Separate 310(Manchester-Millstone) and 368 (Manchester-Card) 345-kV lines and create 368/1767 DCT | In-service | \$11,350,000 | \$11,350,000 |
| Reliability Upgrade | 1a | 1147 | CT | Northeast Utilities | 2011 | 07/2011 | | Waterside Substation - install a three-breaker 115kV ring bus | In-service | \$4,616,000 | \$4,616,000 |
| Reliability Upgrade | 1a | 1151 | CT | United Illuminating Company | 2011 | 06/2011 | | West River 115kV Switching Station Fault Duty Mitigation | In-service | \$2,900,000 | \$2,900,000 |
| Reliability Upgrade | 1a | 799 | RI | National Grid, USA | 2011 | 07/2011 | NEEWS (Rhode Island Reliability Project) | G-185N (Kent County-Drumrock) 115 kV reconductor. | In-service | \$4,500,000 | \$4,500,000 |
| Reliability Upgrade | 1a | 1264 | RI | National Grid, USA | 2011 | 06/2011 | NEEWS (Rhode Island Reliability Project) | Installation of third 345/115kV autotransformer at Kent County. | In-service | Part of RSP 1105 | Part of RSP 1105 |
| Reliability Upgrade | 1a | 924 | MA | National Grid, USA | 2011 | 07/2011 | Central/Western Massachusetts Upgrades | Carpenter Hill - Replace five 115 kV-25 kA breakers with 115 kV-50 kA breakers and upgrade disconnect switch (175-3) to 2000A. | In-service | \$4,200,000 | \$4,200,000 |
| Reliability Upgrade | 1a | 1137 | NH | Northeast Utilities | 2011 | 04/2011 | 2nd Deerfield 345/115kV Autotransformer Project | Replace 5-115kV breakers and add 1-115kV breaker at Deerfield Substation | In-service | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1143 | NH | Northeast Utilities | 2011 | 06/2011 | | Littleton 115kV breaker addition and reconfiguration | In-service | \$7,011,000 | \$7,011,000 |
| Reliability Upgrade | 1a | 624 | ME | Central Maine Power Company | 2011 | 07/2011 | Rumford-Woodstock-Kimball Road Corridor Project | Install 115 kV line (Rumford Industrial Park - Rumford) | In-service | Part of project 625 | Part of project 625 |
| | | | | | | | | | | | \$34,577,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Year | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|--------------------------------|------|---------------------------------|---|--|--------------------|---|---|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system restoration | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 1171 | Vermont Electric Power Company | 2011 | 12/2011 | West Rutland Capacitor Rebuild | Install two 115kV 25 MVAR capacitor banks at West Rutland to address low voltage concerns | Planned | \$2,400,000 | \$2,400,000 |
| Reliability Upgrade | 1a | 798 | National Grid, USA | 2011 | 12/2011 | NEEWS (Rhode Island Reliability Project) | Upgrade of 115kV terminal equipment at Franklin Square. | Planned | \$600,000 | \$600,000 |
| Reliability Upgrade | 1b | 1133 | Central Maine Power Company | 2011 | 12/2011 | CMP-LSP Leeds Substation | Add 115/34kV Leeds Substation and new 34kV line from Leeds to Turner | Proposed | \$300,000 | \$300,000 |
| Reliability Upgrade | 1b | 1244 | CMEEC | 2011 | 10/2011 | 115kV Circuit Breaker Installation | Install 115kV Bus Tie Circuit Breaker at Stock House Rd Substation | Proposed | \$750,000 | \$750,000 |
| Reliability Upgrade | 1a | 1116 | Bangor Hydro-Electric Company | 2011 | 12/2011 | Maine Power Reliability Program (MPRP) | L 64 Rebuild | Under Construction | \$37,626,000 | \$37,626,000 |
| Reliability Upgrade | 1a | 1156 | Bangor Hydro-Electric Company | 2011 | 12/2011 | Maine Power Reliability Program (MPRP) | Orrington Shunt Cap Reconfiguration | Under Construction | \$2,260,262 | \$2,260,262 |
| Reliability Upgrade | 1a | 1131 | Central Maine Power Company | 2011 | 11/2011 | CMP-LSP Bowman St. Substation | Add 115/34kV transformer | Under Construction | \$600,000 | \$600,000 |
| Reliability Upgrade | 1a | 1219 | Northeast Utilities | 2011 | 12/2011 | | Install 115kV two 13.3 MVAR capacitor banks at Oak Hill substation | Under Construction | \$4,000,000 | \$4,000,000 |
| Reliability Upgrade | 1a | 277 | Northeast Utilities | 2011 | 11/2011 | 2nd Deerfield 345/115kV Autotransformer Project | Add 2nd 345/115 kV autotransformer and 3-345kV breakers at Deerfield substation. | Under Construction | \$52,000,000 | \$52,000,000 |
| Reliability Upgrade | 1a | 1140 | Northeast Utilities | 2011 | 10/2011 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV C129 Line | Under Construction | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1165 | NSTAR Electric Company | 2011 | 12/2011 | Mystic Breaker Additions Project | Move Transformer 110B Connection at Mystic | Under Construction | \$2,600,000 | \$2,600,000 |
| Reliability Upgrade | 1a | 1076 | Northeast Utilities | 2011 | 12/2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1311) 115kV line | Under Construction | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 1109 | National Grid, USA | 2011 | 12/2011 | NEEWS (Rhode Island Reliability Project) | South Wrentham 115kv terminal equipment upgrades | Under Construction | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 790 | National Grid, USA | 2011 | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Berry Street 345/115 kV substation. | Under Construction | \$52,000,000 | \$52,000,000 |
| Reliability Upgrade | 1a | 1098 | National Grid, USA | 2011 | 12/2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | 345/115kV line interconnections at Berry Street | Under Construction | \$22,000,000 | \$22,000,000 |
| Reliability Upgrade | 1a | 1266 | Northeast Utilities | 2011 | 12/2011 | | 115kV Pleasant to Blandford (portion of 1421) Line structure replacement | Under Construction | \$9,960,000 | \$9,960,000 |
| Reliability Upgrade | 1a | 1267 | Northeast Utilities | 2011 | 12/2011 | | 115kV Blandford to Southwick (portion of 1512) Line structure replacement | Under Construction | \$9,600,000 | \$9,600,000 |
| Reliability Upgrade | 1a | 301 | NSTAR Electric Company | 2011 | 12/2011 | Greater Boston - Central | Reconductor 115-kV circuits 320-507 and 320-508. (Lexington - Waltham) | Under Construction | \$9,600,000 | \$9,600,000 |
| Reliability Upgrade | 1a | 1066 | NSTAR Electric Company | 2011 | 12/2011 | NPCC BPS Compliance | Needham Station | Under Construction | \$8,000,000 | \$8,000,000 |
| Reliability Upgrade | 1a | 484 | National Grid, USA | 2011 | 11/2011 | Greater Rhode Island Transmission Reinforcements ¹ | Add (1) new 115 kV breaker at Woonsocket. | Under Construction | \$580,000 | \$580,000 |
| Reliability Upgrade | 1a | 1056 | Northeast Utilities | 2011 | 12/2011 | LSP - Sherwood Substation | Sherwood Substation - add a 115/13.8-kV substation with two transformers and a 115-kV circuit breaker. | Under Construction | \$10,969,000 | \$10,969,000 |
| Reliability Upgrade | 1a | 1050 | United Illuminating Company | 2011 | 12/2011 | | Devon Tie 115kV Switching Station BPS Compliance | Under Construction | \$4,000,000 | \$4,000,000 |
| Reliability Upgrade | 1b | 1191 | NSTAR Electric Company | 2012 | 12/2012 | | Rebuild Section of Line 322 (Canal-Carver) | Concept | \$12,200,000 | \$12,200,000 |
| Reliability Upgrade | 1b | 1204 | NSTAR Electric Company | 2012 | 06/2012 | | Rebuild the Mashpee Substation to a Ring Bus and install an overvoltage trip relay on the Mashpee 115kV Capacitor Bank | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1207 | NSTAR Electric Company | 2012 | 2012 | Belmont Transmission Interconnection | Build a new 115kV Substation for the Belmont Transmission Interconnection | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 1129 | Central Maine Power Company | 2012 | 05/2012 | | New 115kV line between Wyman Hydro and Rice Rips Tap, parallel to exiting Section 83. Install a 115kV circuit breaker at Wyman Hydro termination | Planned | \$32,800,000 | \$32,800,000 |
| Reliability Upgrade | 1a | 1135 | Central Maine Power Company | 2012 | 02/2012 | CMP-Athens Substation LSP | Add two 115kV circuit breakers on Section 66; and 115/12kV transformer | Planned | \$1,500,000 | \$1,500,000 |

1-2011 Concept
2-2011 Planned
2-2011 Proposed
18-2011 UnderConstruct

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|--------------------------------|------|---------------------------------|-------------------------------|---|---------------|----------------------------|--------------|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system resoration | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 1184 | Central Maine Power Company | 2012 | 05/2012 | Starks Switching Station | Add 4-115kV circuit breakers in a breaker-and a-half configuration on Section 63 and 2-18 MVar cap banks at a new Starks Switching Station | Planned | \$9,750,000 | \$9,750,000 |
| Reliability Upgrade | 1a | 1251 | Central Maine Power Company | 2012 | 12/2012 | Lakewood Substation Expansion | Sectionalize Section 241 by adding four 115kV circuit breakers at Lakewood Substation and install a second 115/34.5 kV transformer | Planned | \$13,700,000 | \$13,700,000 |
| Reliability Upgrade | 1a | 1172 | Vermont Electric Power Company | 2012 | 06/2012 | Vermont Shunt Reactors | Install 345kV 60 MVar shunt reactors (two at Coolidge and one at New Haven and relocate the New Haven reactor to Vernon) to address high voltage concerns | Planned | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 318 | Vermont Electric Power Company | 2012 | 12/2012 | Georgia Substation Rebuild | Rebuild the existing Georgia substation 115 kV bus into a ring bus to address reliability problems due to breaker failure contingencies | Planned | \$16,000,000 | \$16,000,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|--------------------------------|------|---------------------------------|--|--|---------------|------------------------------|------------------------------|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system restoration | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 1169 | Vermont Electric Power Company | 2012 | 12/2012 | Ascutney Substation Rebuild | Rebuild the existing Ascutney substation 115kV bus into a ring bus, to address reliability problems due to breaker failure contingencies | Planned | \$14,500,000 | \$14,500,000 |
| Reliability Upgrade | 1a | 1194 | Vermont Electric Power Company | 2012 | 12/2012 | LSP Jay Substation | Construct a new 4-breaker ring substation at Jay with two 115/46kV transformers | Planned | \$6,500,000 | \$6,500,000 |
| Reliability Upgrade | 1a | 921 | National Grid, USA | 2012 | 12/2012 | Auburn Area Transmission System Upgrades | Bridgewater substation - Upgrade Bus work and convert to BPS substation. | Planned | \$40,000,000 | \$40,000,000 |
| Reliability Upgrade | 1a | 59 | National Grid, USA | 2012 | 12/2012 | Auburn Reliability Transmission System Upgrades | G18, F19 line terminals 115kV upgrades at Bridgewater sub | Planned | Part of RSP 921 | Part of RSP 921 |
| Reliability Upgrade | 1a | 840 | NSTAR Electric Company | 2012 | 12/2012 | Merrimack Valley/North Shore Reliability Project | Upgrade the 115 kV line (Line 423-515) from Mystic-Everett by adding a new parallel cable to the existing 115 kV cable. (NSTAR portion only) | Planned | \$5,900,000 | \$5,900,000 |
| Reliability Upgrade | 1a | 776 | National Grid, USA | 2012 | 11/2012 | Merrimack Valley/North Shore Reliability Project | Re-conductor O-167 (NGRID portion of Mystic - Everett) 115 kV line. | Planned | \$3,125,000 | \$3,125,000 |
| Reliability Upgrade | 1a | 1068 | NSTAR Electric Company | 2012 | 12/2012 | Long Term Lower SEMA Upgrades | connect to existing #120 line and install a 345KV - 115KV auto-transformer at new substation about 3 miles west of the Barnstable Substation Loop Line #115 in and out of the new Substation. Create a new line position at the Bourne Substation and connect the Bourne-Canal section of Line | Planned | \$106,500,000 | \$106,500,000 |
| Reliability Upgrade | 1a | 592 | NSTAR Electric Company | 2012 | 12/2012 | Long Term Lower SEMA Upgrades | Separate existing 345kV double circuit Cape Cod Canal crossing. The lines being separated are 322 (Canal-Carver) and 342 (Canal-Pilgrim-Auburn) | Planned | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1a | 1118 | National Grid, USA | 2012 | 12/2012 | Long Term Lower SEMA Upgrades | Upgrade 115kV line D21 (Bellrock-High Hill) | Planned | \$6,000,000 | \$6,000,000 |
| Reliability Upgrade | 1a | 942 | National Grid, USA | 2012 | 12/2012 | Central/Western Massachusetts Upgrades | Webster St. - add two 115 kV circuit breakers. | Planned | \$3,650,000 | \$3,650,000 |
| Reliability Upgrade | 1a | 925 | National Grid, USA | 2012 | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - supply 13 kV from T3 and T4. | Planned | Part of RSP 926 | Part of RSP 926 |
| Reliability Upgrade | 1a | 926 | National Grid, USA | 2012 | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - replace T8 autotransformer with 230 kV 333 mVA, upgrade breaker and bus to 115 kV. Install high side 230 kV breaker. | Planned | \$14,700,000 | \$14,700,000 |
| Reliability Upgrade | 1a | 932 | National Grid, USA | 2012 | 11/2012 | Central/Western Massachusetts Upgrades | Pratts Jct. - increase thermal rating of I-135 and J-136 buswork. | Planned | Part of RSP 926 | Part of RSP 926 |
| Reliability Upgrade | 1a | 943 | National Grid, USA | 2012 | 12/2012 | Central/Western Massachusetts Upgrades | Millbury - new 115 kV breaker position for new line to Twr 510. | Planned | \$4,100,000 | \$4,100,000 |
| Reliability Upgrade | 1a | 955 | National Grid, USA | 2012 | 10/2012 | Central/Western Massachusetts Upgrades | Reconductor (W175) W Charlton - Little Rest - Palmer w/1590 ACSR. | Planned | \$13,800,000 | \$13,800,000 |
| Reliability Upgrade | 1a | 1217 | Northeast Utilities | 2012 | 12/2012 | Central/Western Massachusetts Upgrades | Substation work at Ludlow (MA) and Scitico (CT) associated with the new Hampden (MA) substation project (Ngrid) | Planned | \$3,140,000 | \$3,140,000 |
| Reliability Upgrade | 1a | 1268 | Northeast Utilities | 2012 | 12/2012 | | 345kV Northfield Mountain to Berkshire (portion of 312) line structure replacements | Planned | \$7,900,000 | \$7,900,000 |
| Reliability Upgrade | 1a | 673 | National Grid, USA | 2012 | 12/2012 | Worcester Area Reinforcements | Add new 115kV bay to separate the M-165 & E-157 terminal at Millbury #2 Substation | Planned | \$2,200,000 | \$2,200,000 |
| Reliability Upgrade | 1a | 676 | National Grid, USA | 2012 | 12/2012 | Worcester Area Reinforcements | New Bloomingdale to Vernon Hill 115 kV (UG Cable-3.6 mi.) new 115kV breaker at Bloomingdale & Vernon Hill | Planned | \$30,000,000 | \$30,000,000 |
| Reliability Upgrade | 1a | 1201 | NSTAR Electric Company | 2012 | 12/2012 | Greater Boston - North | 115kV line Reconductoring of the P168/128-518 Line between Chelsea and Revere (NSTAR Portion of the line) | Planned | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 1168 | Holyoke Gas & Electric | 2012 | 12/2012 | North Canal 44P | Loop the 1525 (Holyoke Fairmont South 115kV) line into the new North Canal 44P | Planned | \$4,100,000 | \$4,100,000 |
| Reliability Upgrade | 1a | 1095 | National Grid, USA | 2012 | 12/2012 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV West Farnum Substation | Planned | \$73,800,000 | \$73,800,000 |
| Reliability Upgrade | 1a | 1106 | National Grid, USA | 2012 | 06/2012 | NEEWS (Rhode Island Reliability Project) | Kent County Substation Upgrades related to third 345/115 kV Autotransformer. | Planned | \$26,000,000 | \$26,000,000 |
| Reliability Upgrade | 1a | 1096 | National Grid, USA | 2012 | 06/2012 | NEEWS (Rhode Island Reliability Project) | Drumrock substation: Terminal equipment upgrades, Protection modifications and upgrades to meet BPS standards | Planned | \$12,000,000 | \$12,000,000 |
| Reliability Upgrade | 1a | 1099 | National Grid, USA | 2012 | 06/2012 | NEEWS (Rhode Island Reliability Project) | Hartford Ave 115kV terminal equipment upgrades | Planned | \$6,000,000 | \$6,000,000 |
| Reliability Upgrade | 1a | 1227 | Northeast Utilities | 2012 | 2012 | LSP - Stamford Area | Add 4th transformer and build a five breaker ring bus at South End Substation | Planned | \$6,400,000 | \$6,400,000 |
| Reliability Upgrade | 1b | 843 | NSTAR Electric Company | 2012 | 06/2012 | Boston Area 115 kV Enhancements | Install (2) new 115 kV breakers at Trapelo Road. | Proposed | \$3,450,000 | \$3,450,000 |
| Reliability Upgrade | 1b | 1242 | CMEEC | 2012 | 10/2012 | SNEW 115kV substation | SNEW 115/13.8kV substation with two transformers and a 115kV circuit breaker looped into the 1890 line (between Norwalk Hbr - Ety Ave) | Proposed | \$2,000,000 | \$2,000,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Year | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|---|------|---------------------------------|---|--|--------------------|---|---|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system restoration | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 143 | Bangor Hydro-Electric Company | 2012 | 12/2012 | Down East Reliability Improvement | Contract 115 kV from Trenton tap (part of Hancock Reliability Project) to new Tunk Lake Substation (2 new breakers) to Harrington Substation to Epping Substation (3 new breakers) | Under Construction | \$66,100,000 | \$66,100,000 |
| Reliability Upgrade | 1a | 1182 | Northeast Utilities | 2012 | 06/2012 | LSP New Eagle Substation and 115/34.5KV transformer | New 115kV Eagle Substation connected to 115/34.5kV Thornton Substation | Under Construction | \$22,800,000 | \$22,800,000 |
| Reliability Upgrade | 1a | 934 | National Grid, USA | 2012 | 12/2012 | Central/Western Massachusetts Upgrades | Reconductor #2 Tap from Tower 510 - Webster St. 115 kV circuit. | Under Construction | Part of RSP 935 | Part of RSP 935 |
| Reliability Upgrade | 1a | 935 | National Grid, USA | 2012 | 12/2012 | Central/Western Massachusetts Upgrades | Reconductor from (A-127E/B-128E) Millbury - Tower 510 115 kV line. | Under Construction | \$10,200,000 | \$10,200,000 |
| Reliability Upgrade | 1a | 944 | National Grid, USA | 2012 | 03/2012 | Central/Western Massachusetts Upgrades | Wachusett - install one 345 kV, 448 mVA transformer, one 345 kV breaker, and one 115 kV breaker. | Under Construction | \$15,700,000 | \$15,700,000 |
| Reliability Upgrade | 1a | 1216 | Northeast Utilities | 2012 | 04/2012 | | 345kV Ludlow - Northfield (portion of 354) Line Structure replacements | Under Construction | \$25,100,000 | \$25,100,000 |
| Reliability Upgrade | 1a | 969 | NSTAR Electric Company | 2012 | 11/2012 | Greater Boston - North | Add a new 115kV 36.7 MVAR capacitor bank at Chelsea. | Under Construction | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 1065 | NSTAR Electric Company | 2012 | 07/2012 | NPCC BPS Compliance | Waltham Station | Under Construction | \$14,700,000 | \$14,700,000 |
| Reliability Upgrade | 1a | 1193 | United Illuminating Company | 2012 | 12/2012 | | North Haven 115kV Capacitor Bank TRV Mitigation Project | Under Construction | \$4,900,000 | \$4,900,000 |
| Reliability Upgrade | 1a | 1111 | United Illuminating Company | 2012 | 01/2012 | | Union Avenue 115/26.4 kV Substation | Under Construction | \$13,500,000 | \$13,500,000 |
| Reliability Upgrade | 1a | 976 | United Illuminating Company | 2012 | 05/2012 | | Grand Avenue 115 kV Switching Station Rebuild. | Under Construction | \$70,000,000 | \$70,000,000 |
| Reliability Upgrade | 1a | 1196 | Bangor Hydro-Electric Company | 2012 | 01/2012 | SVC Filter Upgrade (Part of Keene Rd Auto-transformer ID 144) | Upgrade of filter bank at Chester SVC facility | Under Construction | \$3,500,000 | \$3,500,000 |
| Reliability Upgrade | 1b | 1031 | Bangor Hydro-Electric Company | 2013 | 12/2013 | Maine Power Reliability Program (MPRP) | Rebel Hill Switching Station | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1154 | Bangor Hydro-Electric Company | 2013 | 12/2013 | Maine Power Reliability Program (MPRP) | Rerate Line 66 | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1155 | Bangor Hydro-Electric Company | 2013 | 12/2014 | Maine Power Reliability Program (MPRP) | Capacitor Bank Addition (10 MVAR at Trenton 34.5kV and Epping) | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 593 | NSTAR Electric Company | 2013 | 2013 | Mid Cape Reliability Project | Add a new 115 kV line from Bourne and Barnstable/Falmouth/equivalent | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1181 | NSTAR Electric Company | 2013 | 12/2013 | | Rebuild the High Hill 115kV Substation to a Breaker and a half design | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1205 | NSTAR Electric Company | 2013 | 12/2013 | Mid-Cape Reliability Project | Separate 120 (Canal-Barnstable) /122 (Oak St-Barnstable) DCT | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1249 | NSTAR Electric Company | 2013 | 12/2013 | | Rebuild the Wareham Substation to a breaker and a half scheme | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1255 | CELD (Chicopee Electric Light Department) | 2013 | 12/2013 | CELD 115/13.8kV Substation | 115/13.8kV substation on Memorial Dr. with two transformers and twelve feeders looped into 1904 (1723) line between Piper and Fairmont substations | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1243 | CMEEC | 2013 | 10/2013 | TTD's Fitch St 115kV Substation | TTD 115/27kV substation with two transformers and a 115kV circuit breaker looped into 1416 line (between Compo and Darien substations) | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 1197 | Bangor Hydro-Electric Company | 2013 | 12/2013 | Keene Rd Autotransformer | Orrington 345kV Series Breaker Addition | Planned | \$1,761,250 | \$1,761,250 |
| Reliability Upgrade | 1a | 1026 | Central Maine Power Company | 2013 | 12/2013 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction associated with (Suowiec-Raven Farm, South Gorham-Maguire Road, Maguire Road-Elliott Switching Station) line work | Planned | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M | \$36,000,000 |
| Reliability Upgrade | 1a | 1028 | Central Maine Power Company | 2013 | 12/2013 | Maine Power Reliability Program (MPRP) | Rebuild existing 115kV Line (Section 250, Maguire Rd-Three Rivers) | Planned | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M | Portion of CMP \$1.364 (billion) and portion of NU is \$36.0M |
| Reliability Upgrade | 1a | 1030 | Central Maine Power Company | 2013 | 11/2013 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Maguire Road) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 680 | National Grid, USA | 2013 | 06/2013 | | Rebuild Bellows Falls Substation and install 115 kV capacitor bank. | Planned | \$7,393,000 | \$7,393,000 |
| Reliability Upgrade | 1a | 674 | National Grid, USA | 2013 | 12/2013 | | Replace Comerford 230 kV breakers and add (1) 230 kV bus tie breaker. | Planned | \$19,460,000 | \$19,460,000 |
| Reliability Upgrade | 1a | 1170 | Vermont Electric Power Company | 2013 | 06/2013 | Bennington Substation Rebuild | Rebuild the exiting Bennington substation 115kV bus into a ring bus to address reliability problems due to breaker failure contingencies | Planned | \$28,000,000 | \$28,000,000 |
| Reliability Upgrade | 1a | 1195 | Vermont Electric Power Company | 2013 | 03/2013 | Highgate Refurbishment | Replace Highgate controls and cooling system | Planned | \$35,600,000 | \$35,600,000 |
| Reliability Upgrade | 1a | 929 | National Grid, USA | 2013 | 09/2013 | Central/Western Massachusetts Upgrades | Searsburg - install in-line 69 kV breaker for operational flexibility. | Planned | \$2,500,000 | \$2,500,000 |
| Reliability Upgrade | 1a | 931 | National Grid, USA | 2013 | 01/2013 | Central/Western Massachusetts Upgrades | Park St. - incremental cost of designing for 115 kV instead of 69 kV. | Planned | \$531,481 | \$531,481 |
| Reliability Upgrade | 1a | 928 | National Grid, USA | 2013 | 06/2013 | Central/Western Massachusetts Upgrades | Millbury -upgrade terminal equipment for O-141, P-142, B-128, A-127 circuit breakers. | Planned | \$3,400,000 | \$3,400,000 |

**3-2012 Concept
32-2012 Planned
2 -2012 Proposed
12 -2012 UnderConstruct**

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Year | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|-----------------------------|------|---------------------------------|---|---|--------------------|---|---|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system restoration | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 938 | National Grid, USA | 2013 | 05/2013 | Central/Western Massachusetts Upgrades | Deerfield - install a new 115/69kV autotransformer and a 69kV breaker and disconnect switches. | Planned | \$5,430,000 | \$5,430,000 |
| Reliability Upgrade | 1a | 941 | National Grid, USA | 2013 | 8/2013 | Central/Western Massachusetts Upgrades | Install new Z126 Millbury - Tower #510 115 kV line. | Planned | \$13,748,000 | \$13,748,000 |
| Reliability Upgrade | 1a | 687 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Fairmont 16H Substation Expansion | Planned | \$718,000,000 | \$718,000,000 |
| Reliability Upgrade | 1a | 826 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | South Agawam 42E Substation Reconfigure | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 828 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Breckwood 115kV circuit 1322 Reactor Bypass and Open Breckwood Substation 1T breaker and maintain breaker in the normally open position | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1075 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add 2nd high speed protection scheme to Agawam to Elm (1007) 115kV line if the Russell Biomass Plant, queue position #135 is constructed | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1078 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Pineshed (1327) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1079 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Mt. Tom (1428) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1080 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Replace 4T and 6T 115kV circuit breaker to Shawinigan substation | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1202 | NSTAR Electric Company | 2013 | 06/2013 | NEEWS (Ancillary Interstate Reliability Project) | Rebuild 1.2 mile length of line 336 with 2-900 ACSS conductor and replace 5, 345kV 2000 amp disconnect switches with 3000 amp switches at W. Medway station | Planned | \$1,700,000 | \$1,700,000 |
| Reliability Upgrade | 1a | 1256 | Unitil | 2013 | 06/2013 | Flagg Pond Upgrades | At Flagg Pond Substation upgrade terminal equipment on the I-135N, I-135S, J-136N and J-136S 115kV lines and Zone 3 relay upgrades for the J-136N 115kV line. | Planned | \$2,750,000 | \$2,750,000 |
| Reliability Upgrade | 1a | 795 | National Grid, USA | 2013 | 04/2013 | NEEWS (Rhode Island Reliability Project) | New Kent County to West Farnum 345kV (359) line. | Planned | \$69,000,000 | \$69,000,000 |
| Reliability Upgrade | 1a | 1097 | National Grid, USA | 2013 | 01/2013 | NEEWS (Rhode Island Reliability Project) | Relocate and Rebuild 115kV lines in the same ROW associated with new 345kV line from W. Farnum to Kent County including S-175, T172N and T-172S with associated terminal equipment upgrade. | Planned | \$129,800,000 | \$129,800,000 |
| Reliability Upgrade | 1a | 1241 | National Grid, USA | 2013 | 06/2013 | | Re-conductor G-185S (Kent County - Davisville Tap) | Planned | \$4,200,000 | \$4,200,000 |
| Reliability Upgrade | 1a | 1054 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Ancillary Greater Springfield Reliability Project) | Build a new 345 kV line from Manchester to Meekville Junction and re-terminate the 395 line at Meekville Junction | Planned | \$28,800,000 | \$28,800,000 |
| Reliability Upgrade | 1a | 1218 | Northeast Utilities | 2013 | 12/2013 | Millstone 345kV Circuit Separation project & SLOD SPS System Retirement | Separate the 345kV Double Circuit Tower 310/348 and 371/383 Tower configuration | Planned | \$25,600,000 | \$25,600,000 |
| Reliability Upgrade | 1b | 1175 | NSTAR Electric Company | 2013 | 12/2013 | Greater Boston - South | Upgrade the 115kV line 201-501 (Medway-Depot St.) and the 201-502 (Beaver Pond - Depot Street Tap) to a higher capacity line | Proposed | \$3,700,000 | \$3,700,000 |
| Reliability Upgrade | 1b | 1246 | United Illuminating Company | 2013 | 09/2013 | 8300 Line Reconfiguration Project | Reconfiguration of 115kV (8300) line from Mill River to Quinipiac | Proposed | \$17,400,000 | \$17,400,000 |
| Reliability Upgrade | 1a | 887 | National Grid, USA | 2013 | 06/2013 | Auburn Area Transmission System Upgrades | Expand Auburn St Substation to include 2nd 345/115 kV autotransformer and 345 kV ring bus. | Under Construction | \$58,000,000 | \$58,000,000 |
| Reliability Upgrade | 1a | 196 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line (3216), Agawam (MA) - North Bloomfield (CT) | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 818 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Reconstruct the 115kV line South Agawam to Southwick (1768) | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 819 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line Ludlow - Agawam (3196) | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 820 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Expansion of Agawam 16C 115 kV Substation to include new 345 kV station with two 345/115-kV autotransformers. | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 823 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Ludlow 19S 345 kV Substation Expansion, two 345/115kV Autotransformers replacements. Add two 345kV 120 MVar Capacitor additions | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 829 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Piper (1230) 115 kV line. | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Year | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|-----------------------------|------|---------------------------------|---|---|--------------------|---|---|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system resoration | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 1010 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Build 115-kV Cadwell switching 50F station. | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 259 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to Orchard (1426) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 688 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Cadwell (1481) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1100 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Chicopee (1314) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1101 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Orchard (1552) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1102 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Piper (1601) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1103 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Chicopee (1602) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1104 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Cadwell (1603) 115kV line and add 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1105 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Shawinigan (1604) 115kV line and add a 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1070 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1781) 115kV line and add a 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1071 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1782) 115kV line and add a 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1072 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Shawinigan (1845) 115kV line and add 2nd High Speed Protection | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1073 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to East Springfield (5001) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1074 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to East Springfield (5002) 115kV line | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1092 | Northeast Utilities | 2013 | 12/2013 | Agawam (BPS) | Upgrade the Agawam 115kV, Substations to BPS standards together with other misc. substation upgrades | Under Construction | \$12,100,000 | \$12,100,000 |
| Reliability Upgrade | 1a | 974 | United Illuminating Company | 2013 | 05/2013 | | East Shore 115 kV Oil Circuit Breaker & Disconnect Replacements. | Under Construction | \$16,900,000 | \$16,900,000 |
| Reliability Upgrade | 1a | 816 | Northeast Utilities | 2013 | 12/2013 | NEEWS (Greater Springfield Reliability Project) | North Bloomfield 2A Substation Expansion - add a second 345/115-kV autotransformer | Under Construction | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1b | 1248 | NSTAR Electric Company | 2014 | 12/2014 | | Rebuild the Kingston Substation to a breaker and a half scheme | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 699 | United Illuminating Company | 2014 | 12/2014 | | Naugatuck Valley 115 kV reliability improvement. | Concept | \$11,100,000 | \$11,100,000 |
| Reliability Upgrade | 1a | 907 | Central Maine Power Company | 2014 | 05/2014 | Maine Power Reliability Program (MPRP) | Rebuild existing 115kV lines: Sections 86 (Bucksport-Belfast), Section 203 (Detroit-Orrington), Sections 60 & 212 (Coopers Mills-Bowman St-Larrabee Road), Sections 89 & 229 (Livermore Falls-River-Bumford LP) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 909 | Central Maine Power Company | 2014 | 8/2014 | Maine Power Reliability Program (MPRP) | Add 2-115kV breakers & rebuild 86A, new .25 mile transmission at Belfast forming Sections 86 & 266 | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1025 | Central Maine Power Company | 2014 | 05/2014 | Maine Power Reliability Program (MPRP) | Separation of Double Circuit Towers (345kV Kennebec River Crossing 375/377, 115kV Bucksport 65/205) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1132 | Central Maine Power Company | 2014 | 8/2014 | Maine Power Reliability Program (MPRP) | Add 115/34kV transformer at Coopers Mills | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 919 | National Grid, USA | 2014 | 04/2014 | Auburn Area Transmission System Upgrades | Dupont substation - Upgrade Buswork and convert to BPS substation. | Planned | \$13,600,000 | \$13,600,000 |
| Reliability Upgrade | 1a | 1187 | National Grid, USA | 2014 | 06/2014 | A127/B128 Conductor Refurbishment | A127/B128 Conductor Refurbishment - Tower 510 to Harriman Substation, VT | Planned | \$65,000,000 | \$65,000,000 |
| Reliability Upgrade | 1a | 940 | National Grid, USA | 2014 | 06/2014 | Central/Western Massachusetts Upgrades | Reconductor sections of A127W line w/795 ACSS (A127 West reconductoring. Tower 510 to Paxton, French King to French King). | Planned | \$18,000,000 | \$18,000,000 |
| Reliability Upgrade | 1a | 945 | National Grid, USA | 2014 | 05/2014 | Central/Western Massachusetts Upgrades | Adams - install two new 115 kV breakers and replace two existing 115kV breakers | Planned | \$5,000,000 | \$5,000,000 |
| Reliability Upgrade | 1a | 948 | National Grid, USA | 2014 | 05/2014 | Central/Western Massachusetts Upgrades | Hampden - build new 115 kV substation at 1515/O-15S intersection (4 breaker ring). | Planned | \$13,400,000 | \$13,400,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Year | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|-----------------------------|------|---------------------------------|--|---|--------------------|---|---|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system resoration | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 951 | National Grid, USA | 2014 | 01/2014 | Central/Western Massachusetts Upgrades | Install new Otter River - E Winchendon (H-134) 115 kV line. | Planned | \$7,455,440 | \$7,455,440 |
| Reliability Upgrade | 1a | 791 | National Grid, USA | 2014 | 12/2014 | Greater Rhode Island Transmission Reinforcements 1 | New 115 kV circuit between Somerset and Brayton Point. | Planned | \$11,560,000 | \$11,560,000 |
| Reliability Upgrade | 1a | 913 | National Grid, USA | 2014 | 12/2014 | Greater Rhode Island Transmission Reinforcements 1 | Brayton Point substation reinforcements to accommodate the new 115 kV line. | Planned | \$3,250,000 | \$3,250,000 |
| Reliability Upgrade | 1a | 914 | National Grid, USA | 2014 | 12/2014 | Greater Rhode Island Transmission Reinforcements 1 | New third circuit between Somerset and Bell Rock. | Planned | \$28,150,000 | \$28,150,000 |
| Reliability Upgrade | 1a | 917 | National Grid, USA | 2014 | 12/2014 | Greater Rhode Island Transmission Reinforcements 1 | Bell Rock substation expansion. | Planned | \$7,000,000 | \$7,000,000 |
| Reliability Upgrade | 1a | 793 | National Grid, USA | 2014 | 12/2014 | Greater Rhode Island Transmission Reinforcements 1 | Somerset substation reinforcements. | Planned | \$6,400,000 | \$6,400,000 |
| Reliability Upgrade | 1a | 1257 | National Grid, USA | 2014 | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the S-145/T-146 from Tewksbury-North Reading Tap (9.3 miles each) | Planned | \$29,000,000 | \$29,000,000 |
| Reliability Upgrade | 1a | 1258 | National Grid, USA | 2014 | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the Y-151 from Tewksbury Junction - West Methuen (8.2 miles) | Planned | \$11,500,000 | \$11,500,000 |
| Reliability Upgrade | 1a | 1259 | National Grid, USA | 2014 | 06/2014 | Salem Harbor Retirement | 115kV line Reconductoring of the B154/C-155N from King St Tap - South Danvers (14.5 miles each way) | Planned | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 915 | National Grid, USA | 2014 | 12/2014 | Greater Rhode Island Transmission Reinforcements 1 | Reconductor M13 and L14 between Bell Rock and Dexter + Reconductor 69 kV lines 61 and 62. | Planned | \$19,450,000 | \$19,450,000 |
| Reliability Upgrade | 1a | 916 | National Grid, USA | 2014 | 12/2014 | Greater Rhode Island Transmission Reinforcements 1 | Conversion of Jepson 69 kV substation to 115 kV substation. | Planned | \$11,800,000 | \$11,800,000 |
| Reliability Upgrade | 1a | 918 | National Grid, USA | 2014 | 12/2014 | Greater Rhode Island Transmission Reinforcements 1 | Dexter substation changes. | Planned | \$3,180,000 | \$3,180,000 |
| Reliability Upgrade | 1b | 1279 | Central Maine Power Company | 2014 | 12/2014 | | New 345/115kV Autotransformer and 115kV switchyard at Raven Farm substation consisting of a four-bay breaker and a half configuration of eleven (11) breakers | Proposed | \$26,126,000 | \$26,126,000 |
| Reliability Upgrade | 1b | 1280 | Central Maine Power Company | 2014 | 12/2014 | | New 115kV line section 244 and upgraded line section 80 between Coopers Mill and Highland Substations | Proposed | \$62,735,000 | \$62,735,000 |
| Reliability Upgrade | 1b | 1183 | Northeast Utilities | 2014 | 2014 | LSP New Peaselee Substation and 115/34.5kV transformer | New 115kV Peaselee Substation and transmission line work | Proposed | \$12,400,000 | \$12,400,000 |
| Reliability Upgrade | 1b | 965 | NSTAR Electric Company | 2014 | 06/2014 | Greater Boston - South | Add third 115kV line from W. Walpole to Holbrook | Proposed | \$19,000,000 | \$19,000,000 |
| Reliability Upgrade | 1b | 1208 | National Grid, USA | 2014 | 12/2014 | Pittsfield / Greenfield Project | Separation and reconductoring of Cabot Taps (A-127 and Y-177 115kV lines) | Proposed | \$7,400,000 | \$7,400,000 |
| Reliability Upgrade | 1b | 1209 | National Grid, USA | 2014 | 12/2014 | Pittsfield / Greenfield Project | Reconductoring of A-127 between Erving and Cabot Tap with 1590 ACSS | Proposed | \$12,000,000 | \$12,000,000 |
| Reliability Upgrade | 1b | 1210 | National Grid, USA | 2014 | 12/2014 | Pittsfield / Greenfield Project | Harriman 115kV breaker upgrades | Proposed | \$1,100,000 | \$1,100,000 |
| Reliability Upgrade | 1b | 1221 | Northeast Utilities | 2014 | 11/2014 | Pittsfield / Greenfield Project | Modify Northfield Mountain 16R substation and install a 345/115kV autotransformer | Proposed | \$108,500,000 | \$108,500,000 |
| Reliability Upgrade | 1b | 1222 | Northeast Utilities | 2014 | 11/2014 | Pittsfield / Greenfield Project | Build a new 115kV three breaker Switching Station (Erving) ring bus | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1223 | Northeast Utilities | 2014 | 11/2014 | Pittsfield / Greenfield Project | Build a new 115kV line from Northfield Mountain to the new Erving Switching Station | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1224 | Northeast Utilities | 2014 | 11/2014 | Pittsfield / Greenfield Project | Install 115kV 14.4 MVAR capacitor banks at Cumberland, Podick and Amherst Substations | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1225 | Northeast Utilities | 2014 | 11/2014 | Pittsfield / Greenfield Project | Rebuild the Cumberland to Montague 1361 115kV line and terminal work at Cumberland and Montague | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1b | 1226 | Northeast Utilities | 2014 | 11/2014 | Pittsfield / Greenfield Project | Reconductor the Woodland to Pleasant 1371 115-kV line and terminal work at Woodland substation. | Proposed | Part of Pittsfield/Greenfield Project | Part of Pittsfield/Greenfield Project |
| Reliability Upgrade | 1a | 905 | Central Maine Power Company | 2014 | 8/2014 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Orrington-Albion Rd-Coopers Mills, Coopers Mills-Larrabee Road, Larrabee Road-Surweic). | Under Construction | \$1,364,108,000 | \$1,364,108,000 |
| Reliability Upgrade | 1a | 906 | Central Maine Power Company | 2014 | 05/2014 | Maine Power Reliability Program (MPRP) | New 115kV line construction (Orrington-Coopers Mills, Larrabee Road-Middle St,Middle St -Lewiston Lower, Larrabee Road-Livermore Falls, Livermore Falls-Rumford IP) | Under Construction | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 908 | Central Maine Power Company | 2014 | 07/2014 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Albion Road, Larrabee Road); Coopers Mills autotransforme replaces Maxcy's autotransformer | Under Construction | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1158 | Central Maine Power Company | 2014 | 07/2014 | Maine Power Reliability Program (MPRP) | Two 40 MVAR reactors at Albion Road, two 40 MVAR reactors at Larabee Road, two 40 MVAR at Coopers Mills | Under Construction | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |

2-2014 Concept

21 - 2014 Planned

13 -2014 Proposed

4 -2014 UnderConstruct

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Year | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|-----------------------------|------|---------------------------------|--|---|---------------|---|---|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system resoration | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1177 | NSTAR Electric Company | 2015 | 12/2015 | Greater Boston - North | Reconductor 211-503/504 from North Woburn Tap to Reading | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1178 | NSTAR Electric Company | 2015 | 12/2015 | Greater Boston - North | Install 115kV Capacitor Bank at North Woburn | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1190 | NSTAR Electric Company | 2015 | 12/2015 | Greater Boston - North | Install a second 345/115kV Auto Transformer at Woburn | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1189 | NSTAR Electric Company | 2015 | 12/2015 | Greater Boston - Central | Install 3rd 115kV Circuit between Waltham and Brighton | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1234 | National Grid, USA | 2015 | 12/2015 | NEEWS (Interstate Reliability Project) | Install a 115kV redundant breaker in series with breaker #1713 at West Farnum Substation and upgrade to current BPS standards | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 975 | United Illuminating Company | 2015 | 06/2015 | | Pequonnock 115 kV Fault Duty Mitigation. | Concept | \$105,000,000 | \$105,000,000 |
| Reliability Upgrade | 1a | 1141 | Northeast Utilities | 2015 | 2015 | 2nd Deerfield 345/115kV Autotransformer Project | Rochester Substation Upgrades | Planned | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 950 | National Grid, USA | 2015 | 02/2015 | Central/Western Massachusetts Upgrades | E Winchendon - install 115 kV breaker and 115 kV disconnect switch. | Planned | \$1,016,897 | \$1,016,897 |
| Reliability Upgrade | 1a | 953 | National Grid, USA | 2015 | 02/2015 | Central/Western Massachusetts Upgrades | Otter River - expand substation into 6-breaker ring bus with four 115 kV breakers and install two transformers. | Planned | \$10,248,067 | \$10,248,067 |
| Reliability Upgrade | 1a | 954 | National Grid, USA | 2015 | 02/2015 | Central/Western Massachusetts Upgrades | Westminster - install new 69kV breaker, including disconnect switches. | Planned | \$903,909 | \$903,909 |
| Reliability Upgrade | 1a | 946 | National Grid, USA | 2015 | 04/2015 | Central/Western Massachusetts Upgrades | Convert 69 kV (O-15S) Palmer- Hampden to 115 kV. | Planned | \$16,000,000 | \$16,000,000 |
| Reliability Upgrade | 1a | 949 | National Grid, USA | 2015 | 04/2015 | Central/Western Massachusetts Upgrades | Palmer - add 115 kV breaker position for O15S conversion, includes thermal upgrade of W-175 bay. | Planned | \$1,600,000 | \$1,600,000 |
| Reliability Upgrade | 1a | 937 | National Grid, USA | 2015 | 12/2015 | Central/Western Massachusetts Upgrades | Bear Swamp - install one 230-115 kV 333 mVA auto, one 115 kV breaker and upgrade various terminal equipment. | Planned | \$6,602,875 | \$6,602,875 |
| Reliability Upgrade | 1a | 1094 | National Grid, USA | 2015 | 12/2015 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV Millbury Substation equipment | Planned | \$25,000,000 | \$25,000,000 |
| Reliability Upgrade | 1a | 190 | National Grid, USA | 2015 | 12/2015 | NEEWS (Interstate Reliability Project) | New Millbury to West Farnum (366) 345kV line. | Planned | \$81,800,000 | \$81,800,000 |
| Reliability Upgrade | 1a | 794 | National Grid, USA | 2015 | 12/2015 | NEEWS (Interstate Reliability Project) | New West Farnum to Connecticut/Rhode Island border (341) 345kV line (to Lake Road). | Planned | \$71,700,000 | \$71,700,000 |
| Reliability Upgrade | 1a | 1253 | National Grid, USA | 2015 | 04/2015 | | New Crandall St. Substation 115-13 kV substation addition | Planned | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 802 | Northeast Utilities | 2015 | 2015 | NEEWS (Interstate Reliability Project) | Build new 345kV line (3271) Card to Lake Road | Planned | \$218,000,000 | \$218,000,000 |
| Reliability Upgrade | 1a | 1085 | Northeast Utilities | 2015 | 2015 | NEEWS (Interstate Reliability Project) | Card 11F substation expansion | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 810 | Northeast Utilities | 2015 | 2015 | NEEWS (Interstate Reliability Project) | Lake Road 27E 345 kV substation expansion | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 191 | Northeast Utilities | 2015 | 2015 | NEEWS (Interstate Reliability Project) | Build Lake Road to Connecticut/Rhode Island border (341) 345-kV line (to West Farnum). | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1235 | Northeast Utilities | 2015 | 12/2015 | NEEWS (Ancillary Interstate Reliability Project) | Sag elimination on 1410 Line (Montville-Buddington) | Planned | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 1245 | CMEEC | 2015 | 12/2015 | NEEWS (Ancillary Interstate Reliability Project) | Sag elimination on 1410 Line (Montville-Buddington) | Planned | \$60,000 | \$60,000 |
| Reliability Upgrade | 1a | 721 | United Illuminating Company | 2015 | 06/2015 | | New Shelton 115/13.8 kV substation | Planned | \$19,500,000 | \$19,500,000 |
| Reliability Upgrade | 1b | 1220 | Northeast Utilities | 2015 | 12/2015 | Greater Boston - North | Install a new 345kV circuit between Scobie and Pelham NH (this is NU's portion of the new Scobie-Tewksbury circuit) | Proposed | \$40,100,000 | \$40,100,000 |
| Reliability Upgrade | 1b | 1214 | National Grid, USA | 2015 | 12/2015 | Greater Boston - South | Line Reconductoring of the C-129 Beaver Pond - Depot St. Tap) and D-130 (Depot St. Tap - Medway) 115kV lines | Proposed | \$500,000 | \$500,000 |
| Reliability Upgrade | 1b | 1179 | NSTAR Electric Company | 2015 | 12/2015 | Greater Boston - North | Install 2nd 345kV circuit between Bellerica/Burlington town line to Tewksbury | Proposed | \$33,000,000 | \$33,000,000 |

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Year | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|--------------------------------|------|---------------------------------|--|---|---------------|---|---|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system restoration | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1211 | National Grid, USA | 2015 | 12/2015 | Greater Boston - North | Install 2nd 345kV circuit between Tewksbury - Billerica/Burlington Town Line (NSTAR Border) | Proposed | \$32,700,000 | \$32,700,000 |
| Reliability Upgrade | 1b | 1212 | National Grid, USA | 2015 | 12/2015 | Greater Boston - North | 115kV Line Reconductoring of M-139/N-140 Tewksbury-Pinehurst (6.1 miles each) | Proposed | \$11,600,000 | \$11,600,000 |
| Reliability Upgrade | 1b | 1213 | National Grid, USA | 2015 | 12/2015 | Greater Boston - North | Install new 345kV circuit between NH/MA border and Tewksbury (this is NGRID's portion of the new Scobie-Tewksbury circuit) | Proposed | \$23,370,000 | \$23,370,000 |
| Reliability Upgrade | 1b | 1215 | National Grid, USA | 2015 | 12/2015 | Greater Boston - North | New 115kV line between Wakefield - Everett | Proposed | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1b | 1254 | National Grid, USA | 2015 | 12/2015 | Greater Boston - North | Substation work at Revere Substation to increase ratings on the 128-515P/168 line between Chelsea and Revere | Proposed | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1b | 1260 | National Grid, USA | 2015 | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the F-158N/S Wakefield Jct - Everett (7.36 miles) | Proposed | \$3,500,000 | \$3,500,000 |
| Reliability Upgrade | 1b | 1261 | National Grid, USA | 2015 | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the S-145T-146 from North Reading Tap - Wakefield Jct (5.1 miles each) | Proposed | \$10,800,000 | \$10,800,000 |
| Reliability Upgrade | 1b | 1262 | National Grid, USA | 2015 | 12/2015 | Greater Boston - North | 115kV Line reconductoring of the Y-151 from Tewksbury Junction - Tewksbury Substation (1.6 miles) | Proposed | \$1,250,000 | \$1,250,000 |
| Reliability Upgrade | 1b | 956 | National Grid, USA | 2015 | 01/2015 | Central/Western Massachusetts Upgrades | Carpenter Hill - replace one 345 kV, 448 MVA autotransformer and upgrade thermal rating of bus to at least 580 MVA. | Proposed | \$7,021,534 | \$7,021,534 |
| Reliability Upgrade | 1b | 1252 | National Grid, USA | 2015 | 12/2015 | NEEWS (Interstate Reliability Project) | Re-conductor 345kV 328 line (West Farnum-Sherman Rd) | Proposed | \$36,500,000 | \$36,500,000 |
| Reliability Upgrade | 1b | 1233 | National Grid, USA | 2015 | 12/2015 | NEEWS (Interstate Reliability Project) | New Sherman Road 345kV AIS Substation | Proposed | \$36,600,000 | \$36,600,000 |
| Reliability Upgrade | 1b | 1250 | Vermont Electric Power Company | 2016 | 2016 | VELCO LSP - West Rutland Substation | Installation of a 115/46kV transformer at West Rutland between breakers K30 and K34 | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 782 | National Grid, USA | 2016 | 01/2016 | Merrimack Valley/North Shore Reliability Project | Replace existing S145/T146 UG cables with higher capacity cables between Salem Harbor and Railyard. | Planned | \$43,912,000 | \$43,912,000 |
| Reliability Upgrade | 1a | 576 | Northeast Utilities | 2016 | 2016 | NEEWS (Central Connecticut Reliability Project) | Build new 345kV line (3208) North Bloomfield to Frost Bridge. | Planned | \$301,000,000 | \$301,000,000 |
| Reliability Upgrade | 1a | 1114 | Northeast Utilities | 2016 | 2016 | NEEWS (Central Connecticut Reliability Project) | Frost Bridge 18R substation expansion - add a 345/115kV autotransformer. | Planned | Part of NEEWS (Central Connecticut Reliability Project) | Part of NEEWS (Central Connecticut Reliability Project) |
| Reliability Upgrade | 1b | 325 | Vermont Electric Power Company | TBD | TBD | VELCO LSP - Chelsea Substation | Replace (2) SCADA controlled motorized disconnect switches with 115 kV circuit breakers at the existing Chelsea substation to maintain adequate supply to the load. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 324 | Vermont Electric Power Company | TBD | TBD | | Granite to Middlesex 230-kV line with necessary substation upgrades to mitigate several reliability concerns, including those related to the potential Highgate contract termination. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 139 | Vermont Electric Power Company | TBD | TBD | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 2: synchronous condensers expanded to +200- 100 MVAR and two 25 MVAR capacitor banks. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 970 | NSTAR Electric Company | TBD | TBD | Greater Boston - Central | Add a new 345 kV line from Lexington to Waltham. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 971 | NSTAR Electric Company | TBD | TBD | Greater Boston - Central | Add a new 345/230 kV auto at Waltham and 230 kV switching facilities. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1176 | NSTAR Electric Company | TBD | TBD | Greater Boston - Central | Install an oil circulation pipe and heat exchangers at K Street and Chatham Street sections of 250-516/517 circuits | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1198 | NSTAR Electric Company | TBD | TBD | Greater Boston - Central | Add a second 115kV line from Woburn to Burlington | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1199 | NSTAR Electric Company | TBD | TBD | Greater Boston - Central | Install a new 230/115kV auto transformer at Sudbury or equivalent | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1247 | NSTAR Electric Company | TBD | TBD | | Rebuild the Acushnet 115kV Substation | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1084 | Northeast Utilities | TBD | TBD | Greater Hartford Central Connecticut Project | Loop the Millstone - Manchester (310) 345 kV line into the Card substation ⁽²⁾ | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1086 | Northeast Utilities | TBD | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to 115kV line 1704, SW Hartford to South Meadow ⁽²⁾ | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1087 | Northeast Utilities | TBD | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to line 115kV 1722 SW Hartford NW Hartford ⁽²⁾ | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1088 | Northeast Utilities | TBD | TBD | Greater Hartford Central Connecticut Project | Add 2nd high speed protection to 115kV line 1786, East Hartford to Riverside to South Meadow ⁽²⁾ | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 801 | Northeast Utilities | TBD | TBD | | Build Manchester to East Hartford 115-kV cable with a series reactor. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 85 | Northeast Utilities | TBD | TBD | | Upgrade the South Meadow Substation to Bulk Power System standards (BPS). | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1228 | Northeast Utilities | TBD | TBD | Stamford Area | Additional circuit into the Stamford Area (Glenbrook-South End) | Concept | TBD | TBD |

6 -2015 Concept

18 - 2015 Planned

14 - 2015 Proposed

0 -2015 UnderConstruct

1 -2016 Concept

3 - 2016 Planned

0 -2016 Proposed

0 -2016 UnderConstruct

18 - Concept TBD

1- Planned TBD

12- Proposed TBD

November 2011 ISO-NEW ENGLAND Project Listing Update (DRAFT)⁽⁷⁾

| Primary Driver | Part# | Project ID | Primary Equipment Owner | | Projected In-Service Month/Year | Major Project | Project | Nov-11 Status | Nov-11 Estimated PTF Costs | |
|---------------------|-------|------------|-------------------------------|------|---------------------------------|----------------------------------|--|---------------|----------------------------|------------------------|
| Reliability Upgrade | 1b | 1206 | NSTAR Electric Company | 2011 | 12/2011 | | Install a new 230kV breaker for line 282-602 (West Medway-Waltham) at W. Medway for system resoration | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1229 | Northeast Utilities | TBD | TBD | | Replace 115kV 1990 (Frost Bridge-Stevenson) lattice structure | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1230 | Northeast Utilities | TBD | TBD | LSP - Greater Hartford Area | 115kV breaker addition at Northeast Simsbury Substation | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 879 | Bangor Hydro-Electric Company | TBD | TBD | Dynamic Swing Reorder Project | Upgrade 7 of 8 Dynamic Swing Recorders in New England to comply with NERC, NPCC, and ISO-NE Standards. | Planned | \$420,000 | \$420,000 |
| Reliability Upgrade | 1b | 1269 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Amherst Substation - New 345kV breaker and three 25MVar Capacitor Banks | Proposed | \$19,600,000 | \$19,600,000 |
| Reliability Upgrade | 1b | 1270 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | New 115kV line from Fitzwilliams to Monadnock | Proposed | \$10,500,000 | \$10,500,000 |
| Reliability Upgrade | 1b | 1271 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Upgrade the Keene to Monadnock (T198) 115kV line | Proposed | \$11,900,000 | \$11,900,000 |
| Reliability Upgrade | 1b | 1272 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Weare Substation - Add two 13.3 MVar 115V capacitors | Proposed | \$3,600,000 | \$3,600,000 |
| Reliability Upgrade | 1b | 1273 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Rebuild A152 115kV line | Proposed | \$22,500,000 | \$22,500,000 |
| Reliability Upgrade | 1b | 1274 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Rebuild N186 115kV line | Proposed | \$2,300,000 | \$2,300,000 |
| Reliability Upgrade | 1b | 1275 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Upgrade the 381 345kV line | Proposed | \$4,200,000 | \$4,200,000 |
| Reliability Upgrade | 1b | 1276 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Littleton Substation - Add a second 230/115kV autotransformer and associated 115kV substation work | Proposed | \$16,700,000 | \$16,700,000 |
| Reliability Upgrade | 1b | 1277 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Webster Substation - Add four 26.6 MVar 115kV capacitors | Proposed | \$11,900,000 | \$11,900,000 |
| Reliability Upgrade | 1b | 1278 | Northeast Utilities | TBD | TBD | Western New Hampshire Solution | Saco Valley Substation - Add two 25 MVar dynamic Var devices | Proposed | \$15,800,000 | \$15,800,000 |
| Reliability Upgrade | 1b | 1263 | National Grid, USA | TBD | TBD | Northern New Hsmphshire Solution | New C-203 230kV line tap to Littleton NH Substation associated with 2nd 230/115kV auto project | Proposed | \$1,100,000 | \$1,100,000 |
| Reliability Upgrade | 1b | 1200 | NSTAR Electric Company | TBD | TBD | Greater Boston - North | Add a new 345kV UG circuit between Woburn and North Cambridge | Proposed | \$52,000,000 | \$52,000,000 |
| | | | | | | | | | | \$5,460,853,715 |

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs |
|---------------------|-------|------------|--------------------------------|---------------------------------|---------------------------|---|--|----------------|---|
| Reliability Upgrade | 1a | 910 | Central Maine Power Company | 12/2008 | 2008 | Rumford-Woodstock-Kimball Road Corridor Project | Rebuild Section 211 Woodstock - Rumford. | In-Service | \$8,400,000 |
| Reliability Upgrade | 1a | 177 | Northeast Utilities | 12/2008 | 2008 | Monadnock Area Reliability Project | Replace limiting terminal equipment at Webster Substation on line to North Road. | In-Service | Part of Monadnock Area Reliability Project |
| Reliability Upgrade | 1a | 180 | Northeast Utilities | 12/2008 | 2008 | Monadnock Area Reliability Project | Rebuild 115 kV Keene to Swanzey A-152 line. | In-Service | Part of Monadnock Area Reliability Project |
| Reliability Upgrade | 1a | 138 | Vermont Electric Power Company | 12/2008 | 2008 | Northwest Vermont Reliability Project | N. Haven - Vergennes - Q. City 115 kV line. | In-Service | \$70,200,000 |
| Reliability Upgrade | 1a | 923 | National Grid, USA | 12/2008 | 2008 | Auburn Area Transmission System Upgrades | Reconductor 115 kV A94 line and associated substation upgrades. | In-Service | \$2,400,000 |
| Reliability Upgrade | 1a | 781 | National Grid, USA | 10/2008 | 2008 | Merrimack Valley/North Shore Reliability Project | Install 115 kV 30 MVar capacitor bank at Revere. | In-Service | \$1,727,000 |
| Reliability Upgrade | 1a | 841 | NSTAR Electric Company | 11/2008 | 2008 | Mystic Breaker Additions Project | Install (2) new 115 kV West Bus breakers #29 and #31 at Mystic. | In-Service | \$2,300,000 |
| Reliability Upgrade | 1a | 1040 | NSTAR Electric Company | 12/2008 | 2008 | Mystic IPT Breaker Project | Upgrade (4) 115 kV breakers #11, #8, #17 and #3 at Mystic to IPT | In-Service | \$990,000 |
| Reliability Upgrade | 1a | 168 | National Grid, USA | 09/2008 | 2008 | Southwest Rhode Island Reliability Enhancements | Reconductor Kenyon - Wood River 115 kV 1870 line. | In-Service | \$2,234,232 |
| Reliability Upgrade | 1a | 899 | National Grid, USA | 12/2008 | 2008 | Southwest Rhode Island Reliability Enhancements | Kenyon substation upgrades. | In-Service | \$278,000 |
| Reliability Upgrade | 1a | 171 | National Grid, USA | 10/2008 | 2008 | Southwest Rhode Island Reliability Enhancements | Reconductoring L-190 between Kent Co. and Davisville. | In-Service | \$2,666,291 |
| Reliability Upgrade | 1a | 900 | National Grid, USA | 11/2008 | 2008 | Southwest Rhode Island Reliability Enhancements | Wood River substation upgrades. | In-Service | \$130,000 |
| Reliability Upgrade | 1a | 846 | United Illuminating Company | 11/2008 | 2008 | | Replace Mix Avenue 115 kV Oil Circuit Breaker & foundation. | In-Service | \$450,000 |
| Reliability Upgrade | 1a | 208 | Northeast Utilities | 12/2008 | 2008 | NU LSP - Oxford Substation | Install new Oxford (previously Jack's Hill) 115 kV substation. | In-Service | \$4,459,000 |
| Reliability Upgrade | 1a | 571 | Northeast Utilities | 12/2008 | 2008 | Norwalk-Glenbrook Cable Project | Upgrade Flax Hill Substation to BPS. | In-Service | Part of project 248 |
| Reliability Upgrade | 1a | 248 | Northeast Utilities | 12/2008 | 2008 | Norwalk-Glenbrook Cable Project | Install two new 115 kV cables from Norwalk to Glenbrook (accommodate 345 kV class cable). | In-Service | \$249,372,000 |
| Reliability Upgrade | 1a | 246 | Northeast Utilities | 12/2008 | 2008 | Southwest Connecticut Reliability Project PH II (M-N) | Add second 345/115 kV autotransformer at Norwalk Substation along with shunt reactors and 345 kV circuit breakers. | In-Service | \$978,182,000 |
| Reliability Upgrade | 1a | 238 | United Illuminating Company | 12/2008 | 2008 | Southwest Connecticut Reliability Project PH II (M-N) | Build new Singer 345 kV substation with (12) circuit breakers, (2) autos, (4) shunt reactors along with reconnecting Bridgeport Energy thru one of the new autos. Includes 115 kV connection from Singer to Pequonnock substation. | In-Service | \$162,264,000 |
| Reliability Upgrade | 1a | 224 | United Illuminating Company | 12/2008 | 2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install new 345 kV line from East Devon to Singer(UI). | In-Service | \$157,476,000 |
| Reliability Upgrade | 1a | 226 | Northeast Utilities | 12/2008 | 2008 | Southwest Connecticut Reliability Project PH II (M-N) | Install two 345 kV underground cables from Singer(UI) to Norwalk. | In-Service | Part of SWCT (Middletown-Norwalk) Reliability Project |
| Reliability Upgrade | 1a | 235 | Northeast Utilities | 12/2008 | 2008 | Southwest Connecticut Reliability Project PH II (M-N) | Expand Norwalk 345-kV substation and install transfer trip relaying scheme on the 1389 115 kV line between Norwalk and Flax Hill. | In-Service | Part of SWCT (Middletown-Norwalk) Reliability Project |
| Reliability Upgrade | 1a | 247 | Northeast Utilities | 12/2008 | 2008 | Southwest Connecticut Reliability Project PH II (M-N) | Replace Norwalk Harbor 138/115 kV autotransformer. | In-Service | Part of SWCT (Middletown-Norwalk) Reliability Project |

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | TBD |
|--------------------|-------|-------|---------|-------|-------|-------|---------|---------|-------|------|------|------|------|-----|
| In-Service | \$494 | \$327 | \$1,912 | \$800 | \$11 | | | | | | | | | |
| Under Construction | | | | | \$305 | \$153 | | | | | | | | |
| Planned | | | | | \$107 | \$157 | \$2,468 | \$1,602 | \$174 | \$20 | | | | \$0 |
| Proposed | | | | | \$5 | \$50 | \$9 | | | | | | | \$7 |
| Concept | | | | | \$1 | \$22 | \$0 | \$0 | \$11 | \$75 | | \$1 | \$1 | \$0 |
| total | | | \$1,912 | \$800 | \$429 | \$382 | \$2,478 | \$1,602 | \$185 | \$95 | \$0 | \$1 | \$1 | \$7 |

NOTE- Total I/S costs as of Oct 2008 Upd \$1,431,150,385

| | In-Service | UC+PL+PR | UC+PL+PR+C | 2011 | 2012 |
|--------|------------|----------|------------|--------|---------|
| 2002 | \$16 | | | | |
| Oct-09 | \$3,876 | \$3,876 | \$3,876 | 131315 | \$0.006 |
| Dec-09 | \$3,876 | \$3,876 | \$3,876 | 131315 | \$0.006 |
| 2010 | \$3,876 | \$4,293 | \$4,294 | 131330 | \$0.007 |
| 2011 | \$3,876 | \$4,654 | \$4,676 | 132350 | \$0.007 |
| 2012 | \$3,876 | \$7,131 | \$7,154 | 134015 | \$0.011 |
| 2013 | \$3,876 | \$8,734 | \$8,756 | 134635 | \$0.013 |

Notes
 - Gray shading indicates change from JULY '08 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|--------------------------------|---------------------------------|---------------------------|---|--|----------------|---|---|
| Reliability Upgrade | 1a | 684 | Northeast Utilities | 12/2008 | 2008 | Southwest Connecticut Reliability Project PH II (M-N) | Replace (6) 115 kV breakers (4-Glenbrook, 1-Glenbrook Statcom, 1-Southington #1) and (3) 345-kV circuit breakers at Millstone and replace (4) 345- kV breakers with 500-kV breakers at Long Mountain substation. | In-Service | Part of SWCT (Middletown-Norwalk) Reliability Project | Part of SWCT (Middletown-Norwalk) Reliability Project |
| Reliability Upgrade | 1a | 250 | Northeast Utilities | 12/2008 | 2008 | | Add a 345 kV breaker at Ludlow Substation. | In-Service | \$1,644,885 | \$1,644,885 |
| Reliability Upgrade | 1a | 155 | Central Maine Power Company | Northeast Utilities | 2009 | Maguire Road Project | Rebuild Three Rivers - Quaker Hill 115 kV Line K197. | In-Service | \$5,500,000 | \$5,500,000 |
| Reliability Upgrade | 1a | 178 | Northeast Utilities | 02/2009 | 2009 | Monadnock Area Reliability Project | Rebuild 115 kV Garvins to Webster V-182 line. | In-Service | Part of Monadnock Area Reliability Project | Part of Monadnock Area Reliability Project |
| Reliability Upgrade | 1a | 922 | National Grid, USA | 02/2009 | 2009 | Auburn Area Transmission System Upgrades | Reconductor 115kV L1 line and associated substation upgrades. | In-Service | \$800,000 | \$800,000 |
| Reliability Upgrade | 1a | 116 | NSTAR Electric Company | 04/2009 | 2009 | NSTAR 345 kV Transmission Reliability Project | Add 2nd 345 kV UG Cables from Stoughton to Mattapan Sq. to K Street and install another new autotransformer at K. St. | In-Service | \$307,900,000 | \$307,900,000 |
| Reliability Upgrade | 1a | 572 | NSTAR Electric Company | 04/2009 | 2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 345 kV 160 MVAR shunt reactors at Stoughton. | In-Service | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project |
| Reliability Upgrade | 1a | 573 | NSTAR Electric Company | 04/2009 | 2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 345 kV 160 MVAR shunt reactors at K St. | In-Service | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project |
| Reliability Upgrade | 1a | 772 | NSTAR Electric Company | 04/2009 | 2009 | NSTAR 345 kV Transmission Reliability Project | Add (1) 115 kV breaker at K St. | In-Service | Part of NSTAR 345 kV Reliability Project | Part of NSTAR 345 kV Reliability Project |
| Reliability Upgrade | 1a | 136 | Vermont Electric Power Company | 04/2009 | 2009 | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 1: two 115 kV PARs, four 25 MVAR Cap. banks, four +25/-12.5 MVAR synchronous condensers, and two 230/115 transformers. | In-Service | \$62,400,000 | \$62,400,000 |
| Reliability Upgrade | 1a | 695 | NSTAR Electric Company | 07/2009 | 2009 | Short Term Lower SEMA Upgrades | Loop (355) 345 kV line in and out of Carver Substation and add (5) new 345 kV circuit breakers at Carver substation. | In-Service | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA |
| Reliability Upgrade | 1a | 830 | NSTAR Electric Company | 07/2009 | 2009 | Short Term Lower SEMA Upgrades | Add a second 345/115 kV Auto transformer at Carver substation and add (1) new 345 kV circuit breaker and (3) new 115 kV circuit breakers at Carver substation. | In-Service | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA |
| Reliability Upgrade | 1a | 831 | NSTAR Electric Company | 07/2009 | 2009 | Short Term Lower SEMA Upgrades | Add a second 115 kV line from Carver to Tremont and add (2) new 115 kV circuit breakers at Carver substation and (1) new 115 kV circuit breaker at Tremont substation. | In-Service | Part of Short Term Lower SEMA | Part of Short Term Lower SEMA |
| Reliability Upgrade | 1a | 626 | Central Maine Power Company | 04/2009 | | Rumford-Woodstock-Kimball Road Corridor Project | Addition of 115/34.5 kV transformer and six new 115 kV breakers and a half substation at Woodstock. | In-service | \$8,000,000 | \$8,000,000 |
| Reliability Upgrade | 1a | 575 | Central Maine Power Company | 05/2009 | | Heywood Road Project | New Heywood Rd 115kV switchyard with (6) 115kV circuit breakers (3) 115kV line retensionings and 115kV 20 MVAR capacitor bank at Heywood Rd. | In-service | \$7,000,000 | \$7,000,000 |
| Reliability Upgrade | 1a | 1127 | Central Maine Power Company | 05/2009 | | CMP-LSP Newcastle Substation | Add 115/34kV transformer with two 115kV breakers | In-service | \$1,300,000 | \$1,300,000 |
| Reliability Upgrade | 1a | 166 | National Grid, USA | 06/2009 | | | Replace (16) 115 kV breakers at Tewksbury 22. | In-service | \$3,300,000 | \$3,300,000 |
| Reliability Upgrade | 1a | 1009 | Northeast Utilities | 05/2009 | | | Install a 2% reactor on the North Bloomfield-Canton 115kV line and also replacement to the Frostbridge 345/115kV autotransformer | In-service | \$3,089,000 | \$3,089,000 |
| Reliability Upgrade | 1a | 203 | Northeast Utilities | 05/2009 | | NU LSP - Stepstone Substation | Install new Stepstone 115 kV substation in Guilford. | In-service | \$6,332,000 | \$6,332,000 |
| Reliability Upgrade | 1a | 1064 | NSTAR Electric Company | 04/2009 | | | Install (1) 345kV 160 MVAR shunt reactor at Mystic Station | In-service | \$10,400,000 | \$10,400,000 |
| Reliability Upgrade | 1a | 1051 | Central Maine Power Company | 09/2009 | | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Riley 115 kV capacitor bank. | In-service | Part of Project 625 | Part of Project 625 |
| Reliability Upgrade | 1a | 267 | Northeast Utilities | 8/2009 | | Y138 Closing | White Lake - Saco Valley (Y138) Line Closing - Add PAR on Y138 at Saco Valley, retension lines, upgrade Beebe terminal, and add capacitor banks at White Lake and Beebe. | In-service | \$27,775,000 | \$27,775,000 |
| Reliability Upgrade | 1a | 936 | National Grid, USA | 07/2009 | | Central/Western Massachusetts Upgrades | Reconductor (P142/P142S) Rolfe Avenue - West Bolyston 115 kV line w/1590 ACSR. | In-service | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 176 | Northeast Utilities | 07/2009 | | Monadnock Area Reliability Project | New Fitzwilliam 345/115kV substation along with 345 kV breakers. | In-service | \$76,100,000 | \$76,100,000 |
| Reliability Upgrade | 1a | 174 | National Grid, USA | 06/2009 | | Monadnock Area Reliability Project | Reconductor I-135 (Bellows Falls-Monadnock Tap-Flagg Pond) 115 kV line. | In-service | \$15,778,000 | \$15,778,000 |
| Reliability Upgrade | 1a | 832 | NSTAR Electric Company | 07/2009 | | Short Term Lower SEMA Upgrades | Add(1) 115kV SVC (0-112 MVARs lagging) at Barnstable. | In-service | \$82 M (Total NSTAR Project Cost Including Brook St. Station upgrade) | \$82,000,000 |
| Reliability Upgrade | 1a | 182 | Vermont Electric Power Company | 09/2009 | | Monadnock Area Reliability Project | Upgrade bus cable at N. Rutland and K35 115 kV breaker at Rutland. | In-service | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 302 | NSTAR Electric Company | 05/2009 | | Boston Area 115 kV Enhancements | DCT separation of Framingham to Speen St. 433-507 circuit. | In-service | \$3,100,000 | \$3,100,000 |
| Reliability Upgrade | 1a | 320 | Vermont Electric Power Company | 10/2009 | 2009 | Lamoille County Project | Middlesex Substation 115 kV breaker addition. | In-service | \$4,857,000 | \$4,857,000 |
| Reliability Upgrade | 1a | 322 | Vermont Electric Power Company | 10/2009 | 2009 | Lamoille County Project | Installation of new Duxbury Substation that involves looping in and out of the Middlesex - Essex 115 kV (K24) line. | In-service | Part of Lamoille County Project | Part of Lamoille County Project |

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|--------------------------------|---------------------------------|---------------------------|---|---|----------------|----------------------------|---------------------|
| Reliability Upgrade | 1a | 321 | Vermont Electric Power Company | 11/2009 | 2009 | Burlington Project | Burlington 115kV Loop - 5 mi of new line & rebuilding 5 miles of existing line between two existing substations with expansion of the East Avenue substation. | In-service | \$25,142,000 | \$25,142,000 |
| Reliability Upgrade | 1a | 1063 | NSTAR Electric Company | 12/2009 | 2009 | | Install (2) 115kV 40 MVAR shunt reactors at Edgar Station | In-service | \$3,745,000 | \$3,745,000 |
| Reliability Upgrade | 1a | 777 | National Grid, USA | 11/2009 | 2009 | Merrimack Valley/North Shore Reliability Project | Build Wakefield Junction station with four 345/115 kV autotransformers. | In-service | \$95,000,000 | \$95,000,000 |
| Reliability Upgrade | 1a | 161 | National Grid, USA | 11/2009 | 2009 | Merrimack Valley/North Shore Reliability Project | Loop 345 kV 339 line and 115 kV S-145/T-146 into new Wakefield Jct. Substation. | In-service | \$5,406,900 | \$5,406,900 |
| Reliability Upgrade | 1a | 961 | NSTAR Electric Company | 12/2009 | 2009 | Mystic Breaker Additions Project | Install (2) new 115 kV East Bus breakers #30 and #32 at Mystic. | In-service | \$3,689,000 | \$3,689,000 |
| Reliability Upgrade | 1a | 903 | NSTAR Electric Company | 12/2009 | 2009 | Mystic IPT Breaker Project | Upgrade (4) 115 kV breakers #2, #4, #5, and #16 at Mystic to IPT and separate controls with Boston Gen units #5 and #6. | In-service | \$1,576,000 | \$1,576,000 |
| Reliability Upgrade | 1a | 930 | National Grid, USA | 11/2009 | 2009 | Central/Western Massachusetts Upgrades | Reconductor Nashua St - Quinsigamond Jct (O141) 115 kV line w/636 ACSS. | In-service | \$2,300,000 | \$2,300,000 |
| Reliability Upgrade | 1a | 211 | Northeast Utilities | 11/2009 | 2009 | NU LSP - Rood Ave Substation | New Rood Ave (formally Windsor) distribution substation with 115kV terminal modifications. | In-service | \$8,681,000 | \$8,681,000 |
| Reliability Upgrade | 1a | 789 | National Grid, USA | 12/2009 | 2009 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Reconductoring of T7 115 kV line. | In-service | \$23,304,000 | \$23,304,000 |
| Reliability Upgrade | 1b | 963 | NSTAR Electric Company | 12/2009 | 2009 | Boston Area 115 kV Enhancements | Add a new 115kV breaker # 11. Relocate 447-509 and add control and protection at Holbrook. | In-service | \$1,276,800 | \$1,276,800 |
| Reliability Upgrade | 1a | 933 | National Grid, USA | 01/2010 | 2010 | Central/Western Massachusetts Upgrades | Reconductor Pratts Jct - Flagg Pond I-135S & J-136S 115 kV lines w/795 ACSS. | In-service | \$11,200,000 | \$11,200,000 |
| Reliability Upgrade | 1b | 1167 | NSTAR Electric Company | 12/2010 | 2010 | | Replace three 40kA 115kV circuit breakers at Carver with 63kV breakers | Concept | \$850,000 | \$850,000 |
| Reliability Upgrade | 1b | 1157 | Bangor Hydro-Electric Company | 12/2010 | 2010 | | Bangor Hydro Synchrophasors | Concept | \$100,000 | \$100,000 |
| Reliability Upgrade | 1a | 1128 | Central Maine Power Company | 07/2010 | 2010 | CMP-LSP Hotel Road Substation | Add 115/34kV transformer with 115kV breaker at Hotel Rd. | Planned | \$800,000 | \$800,000 |
| Reliability Upgrade | 1a | 624 | Central Maine Power Company | 2010 | 2010 | Rumford-Woodstock-Kimball Road Corridor Project | Install 115 kV line (New Page - Rumford Industrial Park) | Planned | Part of project 625 | Part of project 625 |
| Reliability Upgrade | 1a | 1145 | Vermont Electric Power Company | 12/2010 | 2010 | Burlington Gorge Project | Installation of a 3-breaker 115kV ring substation and 115/34.5kV transformer on the East Ave. - Tafts Coners 115kV line | Planned | \$14,000,000 | \$14,000,000 |
| Reliability Upgrade | 1a | 1152 | National Grid, USA | 8/2010 | 2010 | | Bear Swamp - Pratts Junction 230kV Line Refurbishment Project (E205E) | Planned | \$43,596,000 | \$43,596,000 |
| Reliability Upgrade | 1a | 842 | NSTAR Electric Company | 06/2010 | 2010 | Boston Area 115 kV Enhancements | Add 115 kV 54 MVAR capacitor bank at W. Framingham. | Planned | \$2,650,000 | \$2,650,000 |
| Reliability Upgrade | 1a | 1113 | NSTAR Electric Company | 12/2010 | 2010 | | Install 115kV Breaker #31 at K St. | Planned | \$2,800,000 | \$2,800,000 |
| Reliability Upgrade | 1a | 928 | National Grid, USA | 12/2010 | 2010 | Central/Western Massachusetts Upgrades | Millbury -upgrade terminal equipment for O-141, P-142, B-128, A-127 circuit breakers. | Planned | \$2,300,000 | \$2,300,000 |
| Reliability Upgrade | 1a | 927 | National Grid, USA | 07/2010 | 2010 | Central/Western Massachusetts Upgrades | Greendale - replace 115 kV breaker and upgrade to 2000A. | Planned | \$680,000 | \$680,000 |
| Reliability Upgrade | 1a | 924 | National Grid, USA | 12/2010 | 2010 | Central/Western Massachusetts Upgrades | Replace five 115 kV-25 kA breakers with 115 kV-50 kA breakers and upgrade disconnect switch (175-3) to 2000A. | Planned | \$2,147,181 | \$2,147,181 |
| Reliability Upgrade | 1a | 1067 | NSTAR Electric Company | 12/2010 | 2010 | NPCC BPS Compliance | Tremont Station | Planned | \$12,370,000 | \$12,370,000 |
| Reliability Upgrade | 1a | 484 | National Grid, USA | 11/2010 | 2010 | Greater Rhode Island Transmission Reinforcements 1 | Add (1) new 115 kV breaker at Woonsocket. | Planned | \$580,000 | \$580,000 |
| Reliability Upgrade | 1a | 1055 | Northeast Utilities | 2010 | 2010 | CT LSP - Waterside Substation | Waterside Substation - add a 115/13.2-kV transformer and a 115-kV circuit breaker. | Planned | \$2,619,000 | \$2,619,000 |
| Reliability Upgrade | 1a | 1049 | United Illuminating Company | 12/2010 | 2010 | | East Shore 115 kV Capacitor Bank Transient Recovery | Planned | \$4,050,000 | \$4,050,000 |
| Reliability Upgrade | 1a | 582 | Northeast Utilities | 12/2010 | 2010 | | Separate 310 and 368 345-kV lines and create 368/1767 DCT | Planned | \$16,000,000 | \$16,000,000 |
| Reliability Upgrade | 1a | 1112 | United Illuminating Company | 12/2010 | 2010 | | Water Street 115kV circuit breaker and switch replacements. | Planned | \$2,840,000 | \$2,840,000 |

inservice 2009 additional \$174,977,700

inservice 2010 \$11,200,00

2010 Concept 2

2010 Planned 15

2010 Proposed 1

2010 Under Constr 18

Notes
 - Gray shading indicates change from JULY '08 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|--------------------------------|---------------------------------|---------------------------|---|---|--------------------|---|---|
| Reliability Upgrade | 1b | 1133 | Central Maine Power Company | 10/2010 | 2010 | CMP-LSP Leeds Substation | Add 115/34kV Leeds Substation & new 34kV line from Leeds to Turner | Proposed | \$300,000 | \$300,000 |
| Reliability Upgrade | 1a | 1166 | NSTAR Electric Company | 12/2010 | 2010 | Greater Boston Reliability Project | Terminal upgrades at W. Walpole and W. Medway for #325 line | Proposed | \$1,350,000 | \$1,350,000 |
| Reliability Upgrade | 1b | 1150 | United Illuminating Company | 12/2010 | 2010 | | Grand Avenue - West River 115 kV Pumping Plant Replacements | Proposed | \$2,900,000 | \$2,900,000 |
| Reliability Upgrade | 1a | 144 | Bangor Hydro-Electric Company | 12/2010 | 2010 | Keene Rd Autotransformer | Installation of a 345/115 kV autotransformer at Keene Rd Substation. | Under Construction | \$29,000,000 | \$29,000,000 |
| Reliability Upgrade | 1a | 625 | Central Maine Power Company | 04/2010 | 2010 | Rumford-Woodstock-Kimball Road Corridor Project | Addition of Rumford Industrial Park capacitor bank. | Under Construction | \$5,400,000 | \$5,400,000 |
| Reliability Upgrade | 1a | 1029 | Central Maine Power Company | 11/2010 | 2010 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformer at South Gorham | Under Construction | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1144 | Central Maine Power Company | 09/2010 | 2010 | Heywood Road Project | Circuit switcher replacements at Detroit, Lakewood, Rice Rips and Winslow | Under Construction | Part of Heywood Road Project | Part of the Heywood Road Project |
| Reliability Upgrade | 1a | 323 | Vermont Electric Power Company | 12/2010 | 2010 | Vermont Southern Loop Project | New VY - Newfane - Coolidge 345 kV line with requisite station upgrades. | Under Construction | \$136,368,000 | \$136,368,000 |
| Reliability Upgrade | 1a | 1032 | Vermont Electric Power Company | 09/2010 | 2010 | Vermont Southern Loop Project | Installation of a new 345/115kV substation called Vernon including a new 345/115kV autotransformer | Under Construction | \$69,815,000 | \$69,815,000 |
| Reliability Upgrade | 1a | 1033 | Vermont Electric Power Company | 12/2010 | 2010 | Vermont Southern Loop Project (VELCO LSP - Newfane Substation) | Installation of a new 345/115kV substation called Newfane | Under Construction | \$16,664,000 | \$16,664,000 |
| Reliability Upgrade | 1a | 1034 | Vermont Electric Power Company | 12/2010 | 2010 | Vermont Southern Loop Project | Loop new 345kV Line into Newfane Substation. | Under Construction | Part of project 323 | Part of project 323 |
| Reliability Upgrade | 1a | 1035 | Vermont Electric Power Company | 12/2010 | 2010 | Vermont Southern Loop Project | Expansion of Coolidge 345kV substation | Under Construction | \$20,117,000 | \$20,117,000 |
| Reliability Upgrade | 1a | 779 | National Grid, USA | 04/2010 | 2010 | Merrimack Valley/North Shore Reliability Project | Bypass and remove Golden Hills 345 kV substation. | Under Construction | \$5,507,195 | \$5,507,195 |
| Reliability Upgrade | 1a | 904 | NSTAR Electric Company | 12/2010 | 2010 | Mystic IPT Breaker Project | Upgrade (5) 115 kV breakers #1, #7, #15 #19 and #20 at Mystic to IPT. | Under Construction | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 1119 | NSTAR Electric Company | 06/2010 | 2010 | Greater Boston Reliability Project | Upgrade West Medway-West Walpole 345kV line #325 | Under Construction | \$2,200,000 | \$2,200,000 |
| Reliability Upgrade | 1a | 1120 | NSTAR Electric Company | 06/2010 | 2010 | | Install 345kV 160 MVAR shunt reactor at W. Walpole | Under Construction | \$7,200,000 | \$7,200,000 |
| Reliability Upgrade | 1a | 902 | National Grid, USA | 10/2010 | 2010 | Middleboro Municipal | Close the E1-M1 loop at Middleboro's Wareham St Sub. | Under Construction | \$715,000 | \$715,000 |
| Reliability Upgrade | 1a | 786 | National Grid, USA | 11/2010 | 2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Terminal upgrades at Drumrock, Chartley Pond, and Brayton Point. | Under Construction | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 787 | National Grid, USA | 06/2010 | 2010 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | West Farnum breaker replacements. | Under Construction | \$7,631,000 | \$7,631,000 |
| Reliability Upgrade | 1a | 809 | Northeast Utilities | 12/2010 | 2010 | | Upgrade terminal equipment at Bunker Hill 115 kV substation. | Under Construction | \$516,000 | \$516,000 |
| Reliability Upgrade | 1a | 1110 | United Illuminating Company | 12/2010 | 2010 | | Broadway 115/13.8 kV Substation Addition | Under Construction | \$1,200,000 | \$1,200,000 |
| Reliability Upgrade | 1b | 301 | NSTAR Electric Company | 12/2011 | 2011 | Boston Area 115 kV Enhancements | Reconductor 115-kV circuits 320-507 and 320-508. | Concept | \$4,600,000 | \$4,600,000 |
| Reliability Upgrade | 1b | 1156 | Bangor Hydro-Electric Company | 12/2011 | 2011 | Maine Power Reliability Program (MPRP) | Orrington Shunt Cap Reconfiguration | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 318 | Vermont Electric Power Company | 12/2011 | 2011 | | Rebuild the existing Georgia substation 115 kV bus into a ring bus to address reliability problems through the 1,250 MW Vermont state load level. | Concept | \$9,000,000 | \$9,000,000 |
| Reliability Upgrade | 1b | 325 | Vermont Electric Power Company | 12/2011 | 2011 | VELCO LSP - Chelsea Substation | Replace (2) SCADA controlled motorized disconnect switches with 115 kV circuit breakers at the existing Chelsea substation to maintain adequate supply to the load. | Concept | \$5,000,000 | \$5,000,000 |
| Reliability Upgrade | 1b | 1153 | NSTAR Electric Company | 12/2011 | 2011 | Boston Area 115 kV Enhancements | Reliability Upgrades at West Framingham Station | Concept | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1a | 1146 | Vermont Electric Power Company | 02/2011 | 2011 | Lyndonville Project | Installation of a 4-breaker ring 115 kV substation consisting of two 115kV 12.5 MVAR capacitor banks and 115/34.5 kV transformer interconnecting to the Irasburg - St. Johnsbury 115kV line | Planned | \$9,000,000 | \$9,000,000 |
| Reliability Upgrade | 1a | 783 | National Grid, USA | 03/2011 | 2011 | Merrimack Valley/North Shore Reliability Project | Extend the 115kV by addition of 115kV Breaker and K-153 line from King St. to W. Amesbury 115kV station. (W. Amesbury 345/115kV Station becomes PTF) | Planned | \$30,349,000 | \$30,349,000 |
| Reliability Upgrade | 1a | 1165 | NSTAR Electric Company | 12/2011 | 2011 | Mystic Breaker Additions Project | Move Transformer 110B Connection at Mystic | Planned | \$1,700,000 | \$1,700,000 |
| Reliability Upgrade | 1a | 929 | National Grid, USA | 06/2011 | 2011 | Central/Western Massachusetts Upgrades | Searsburg - install in-line 69 kV breaker for operational flexibility. | Planned | \$1,381,849 | \$1,381,849 |
| Reliability Upgrade | 1a | 939 | National Grid, USA | 12/2011 | 2011 | Central/Western Massachusetts Upgrades | Reconductor and retention (E205W) Harriman - Bear Swamp Tap 230 kV circuit. | Planned | \$3,389,658 | \$3,389,658 |
| Reliability Upgrade | 1a | 940 | National Grid, USA | 04/2011 | 2011 | Central/Western Massachusetts Upgrades | Reconductor sections of A127W line w/795 ACSS. | Planned | \$6,235,744 | \$6,235,744 |

2011 Concept 5
 2011 Planned 24
 2011 Proposed 6
 2011 Under Constr 6

Notes
 - Gray shading indicates change from JULY '08 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|-------------------------------|---------------------------------|---------------------------|---|---|--------------------|---|---|
| Reliability Upgrade | 1a | 942 | National Grid, USA | 12/2011 | 2011 | Central/Western Massachusetts Upgrades | Webster St. - add two 115 kV circuit breakers. | Planned | \$3,650,000 | \$3,650,000 |
| Reliability Upgrade | 1a | 925 | National Grid, USA | 10/2011 | 2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - supply 13 kV from T3 and T4. | Planned | \$318,888 | \$318,888 |
| Reliability Upgrade | 1a | 926 | National Grid, USA | 10/2011 | 2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - replace T8 autotransformer with 230 kV 333 mVA, upgrade breaker and bus to 115 kV. Install high side 230 kV breaker. | Planned | \$6,027,520 | \$6,027,520 |
| Reliability Upgrade | 1a | 932 | National Grid, USA | 10/2011 | 2011 | Central/Western Massachusetts Upgrades | Pratts Jct. - increase thermal rating of I-135 and J-136 buswork. | Planned | \$372,036 | \$372,036 |
| Reliability Upgrade | 1a | 943 | National Grid, USA | 01/2011 | 2011 | Central/Western Massachusetts Upgrades | Millbury - new 115 kV breaker position for new line to Twr 510. | Planned | \$1,073,995 | \$1,073,995 |
| Reliability Upgrade | 1a | 944 | National Grid, USA | 12/2011 | 2011 | Central/Western Massachusetts Upgrades | Wachusett - install one 345 kV, 448 mVA transformer, one 345 kV breaker, and one 115 kV breaker. | Planned | \$16,530,000 | \$16,530,000 |
| Reliability Upgrade | 1a | 945 | National Grid, USA | 12/2011 | 2011 | Central/Western Massachusetts Upgrades | Adams - install third 115 kV breaker to complete ring bus. | Planned | \$1,584,841 | \$1,584,841 |
| Reliability Upgrade | 1a | 952 | National Grid, USA | 06/2011 | 2011 | Central/Western Massachusetts Upgrades | Reconductor E Winchendon - J136 Tap within I135/J136 ROW w/795 ACSR. | Planned | \$932,156 | \$932,156 |
| Reliability Upgrade | 1a | 955 | National Grid, USA | 11/2011 | 2011 | Central/Western Massachusetts Upgrades | Reconductor (W175) W Charlton - Little Rest - Palmer w/1590 ACSR. | Planned | \$12,213,934 | \$12,213,934 |
| Reliability Upgrade | 1a | 1000 | Northeast Utilities | 12/2011 | 2011 | Agawam-West Springfield Project | Separate and reconductor the 1311 and 1412 (West Springfield - Agawam) 115 kV double circuit. | Planned | \$22,000,000 | \$22,000,000 |
| Reliability Upgrade | 1a | 1076 | Northeast Utilities | 12/2011 | 2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1311) 115kV line | Planned | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 1077 | Northeast Utilities | 12/2011 | 2011 | Agawam-West Springfield Project | Add a 2nd high speed protection scheme to Agawam to West Springfield (1412) 115kV line | Planned | Part of Agawam-West Springfield Project | Part of Agawam-West Springfield Project |
| Reliability Upgrade | 1a | 1066 | NSTAR Electric Company | 09/2011 | 2011 | NPCC BPS Compliance | Needham Station | Planned | \$10,531,000 | \$10,531,000 |
| Reliability Upgrade | 1a | 1147 | Northeast Utilities | 2011 | 2011 | | Waterside Substation - install a three-breaker 115kV ring bus | Planned | \$5,055,000 | \$5,055,000 |
| Reliability Upgrade | 1a | 1148 | Northeast Utilities | 2011 | 2011 | | Add a 2nd high speed relay on the Glennbrook to Waterside 115kV 1440 | Planned | Part of Project #1147 | Part of Project #1147 |
| Reliability Upgrade | 1a | 1056 | Northeast Utilities | 12/2011 | 2011 | CT LSP - Sherwood Substation | Sherwood Substation - add a 115/13.8-kV substation with two transformers and a 115-kV circuit breaker. | Planned | \$10,969,000 | \$10,969,000 |
| Reliability Upgrade | 1a | 1111 | United Illuminating Company | 8/2011 | 2011 | | Metro North Union Avenue 115/26.4 kV Substation | Planned | \$10,543,000 | \$10,543,000 |
| Reliability Upgrade | 1a | 1050 | United Illuminating Company | 12/2011 | 2011 | | Devon Tie 115kV Switching Station BPS Compliance | Planned | \$3,240,000 | \$3,240,000 |
| Reliability Upgrade | 1b | 1116 | Bangor Hydro-Electric Company | 12/2011 | 2011 | Maine Power Reliability Program (MPRP) | L 64 Rebuild | Proposed | \$37,126,000 | \$37,126,000 |
| Reliability Upgrade | 1b | 1130 | Central Maine Power Company | 12/2011 | 2011 | Sturtevant Improvements | Add 115kV circuit breakers & 25 MVAR capacitor bank at Sturtevant Substation; Re-rate Section 63 between Wyman Hydro & Madison Substation | Proposed | \$3,000,000 | \$3,000,000 |
| Reliability Upgrade | 1b | 1131 | Central Maine Power Company | 12/2011 | 2011 | CMP-LSP Bowman St. Substation | Add 115/34kV transformer | Proposed | \$600,000 | \$600,000 |
| Reliability Upgrade | 1b | 1132 | Central Maine Power Company | 12/2011 | 2011 | CMP-LSP Maxcy's Substation | Add 115/34kV transformer (coordinate with MPRP) | Proposed | \$600,000 | \$600,000 |
| Reliability Upgrade | 1b | 964 | NSTAR Electric Company | 06/2011 | 2011 | Boston Area 115 kV Enhancements | Relocate 115kV terminals at W. Walpole to mitigate breaker failure #8. | Proposed | \$5,600,000 | \$5,600,000 |
| Reliability Upgrade | 1b | 1151 | United Illuminating Company | 12/2011 | 2011 | | West River 115kV Switching Station Fault Duty Migration | Proposed | \$3,500,000 | \$3,500,000 |
| Reliability Upgrade | 1a | 934 | National Grid, USA | 09/2011 | 2011 | Central/Western Massachusetts Upgrades | Reconductor #2 Tap from Tower 510 - Webster St. 115 kV circuit. | Under Construction | Part of RSP 935 | Part of RSP 935 |
| Reliability Upgrade | 1a | 935 | National Grid, USA | 09/2011 | 2011 | Central/Western Massachusetts Upgrades | Reconductor from (A-127E/B-128E) Millbury - Tower 510 115 kV line. | Under Construction | \$10,200,000 | \$10,200,000 |
| Reliability Upgrade | 1a | 162 | National Grid, USA | 04/2011 | 2011 | | Q-169 Golden Hills to Lynn 115 kV line upgrade. | Under Construction | \$12,390,000 | \$12,390,000 |
| Reliability Upgrade | 1a | 788 | National Grid, USA | 06/2011 | 2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Kent County substation expansion. | Under Construction | \$42,300,000 | \$42,300,000 |
| Reliability Upgrade | 1a | 790 | National Grid, USA | 12/2011 | 2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | Berry Street 345/115 kV substation. | Under Construction | \$50,600,000 | \$50,600,000 |
| Reliability Upgrade | 1a | 1098 | National Grid, USA | 12/2011 | 2011 | Greater Rhode Island Transmission Reinforcements (Advanced NEEWS) | 345/115kV line interconnections at Berry Street | Under Construction | \$37,529,000 | \$37,529,000 |

| | |
|-------------------|----|
| 2012 Concept | 4 |
| 2012 Planned | 49 |
| 2012 Proposed | 2 |
| 2012 Under Constr | 10 |

Notes
 - Gray shading indicates change from JULY '08 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|-------------------------------|---------------------------------|---------------------------|---|--|----------------|---|---|
| Reliability Upgrade | 1b | 970 | NSTAR Electric Company | 12/2012 | 2012 | Greater Boston Reliability Project | Add a new 345 kV line from Lexington to Waltham. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 971 | NSTAR Electric Company | 12/2012 | 2012 | Greater Boston Reliability Project | Add a new 345/230 kV auto at Waltham and 230 kV switching facilities. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1031 | Bangor Hydro-Electric Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | Rebel Hill Switching Station | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 965 | NSTAR Electric Company | 12/2012 | 2012 | Boston Area 115 kV Enhancements | Add third 115kV line from W. Walpole to Holbrook | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 905 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Orrington-Albion Rd-Coopers Mills, Coopers Mills-Larrabee Road, Larrabee Road-Surowiec). | Planned | \$1,510,000,000 | \$1,510,000,000 |
| Reliability Upgrade | 1a | 906 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | New 115kV line construction (Orrington-Coopers Mills, Coopers Mills-Highland, Larrabee Road-Lewiston Lower, Larrabee Road-Livermore Falls, Livermore Falls-Rumford IP) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 907 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | Rebuild Existing 115kV lines: Sections 86 (Bucksport-Belfast), Section 84 (Albion Road-Coopers Mills), Section 203 (Detroit-Orrington), Section 80 (Coopers Mills-Highland), Sections 60 & 212 (Coopers Mills-Bowman St-Larrabee Road), Sections 89 & 229 (Livermore Falls-Riley-Rumford IP) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 908 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Albion Road, Larrabee Road) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 909 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | Add 2-115kV breakers & rebuild 86A, new .25 mile transmission at Belfast | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1025 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | Separation of Double Circuit Towers (345kV Kennebec River Crossing 375/377 & Maine Yankee 375/392, 115kV Bucksport 65/205) and Maine Yankee 345 kV re-termination | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1026 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | New 345kV Line Construction (Surowiec-Raven Farm, South Gorham-Maguire Road, Maguire Road-Three Rivers) | Planned | Portion of CMP \$1.51B and portion of NU is \$36.0M | \$36,000,000 |
| Reliability Upgrade | 1a | 1027 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | New 115kV Line Construction (Elm Street-East Deering, East Deering -Cape) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1028 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | Rebuild existing 115kV Line (Section 250, Maguire Rd-Three Rivers) | Planned | Portion of CMP \$1.51B and portion of NU is TBD | Portion of CMP \$1.51B and portion of NU is TBD |
| Reliability Upgrade | 1a | 1158 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | Two 40 MVAR reactors at Albion Road, two 40 MVAR reactors at Larabee Road, two 40 MVAR at Coopers Mills | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 1030 | Central Maine Power Company | 12/2012 | 2012 | Maine Power Reliability Program (MPRP) | New 345/115kV Autotransformers (Raven Farm, Maguire Road) | Planned | Part of Maine Power Reliability Program | Part of Maine Power Reliability Program |
| Reliability Upgrade | 1a | 143 | Bangor Hydro-Electric Company | 12/2012 | 2012 | Down East Reliability Improvement | Contract 115 kV from Trenton tap (part of Hancock Reliability Project) to new Tunk Lake Substation to Harrington Substation. | Planned | \$66,100,000 | \$66,100,000 |
| Reliability Upgrade | 1a | 1129 | Central Maine Power Company | 05/2012 | 2012 | | New 115kV line between Wyman Hydro and Heywood Rd. parallel to exiting Section 83. Install a 115kV circuit breaker at Wyman Hydro termination | Planned | \$32,800,000 | \$32,800,000 |
| Reliability Upgrade | 1a | 277 | Northeast Utilities | 2012 | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Add 2nd 345/115 kV autotransformer and 3-345kV breakers at Deerfield substation. | Planned | \$56,000,000 | \$56,000,000 |
| Reliability Upgrade | 1a | 1137 | Northeast Utilities | 2012 | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Replace 5-115kV breakers and add 1-115kV breaker at Deerfield Substation | Planned | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1138 | Northeast Utilities | 2012 | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Rebuild 115kV L175 line | Planned | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1139 | Northeast Utilities | 2012 | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV M183 Line | Planned | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 1140 | Northeast Utilities | 2012 | 2012 | 2nd Deerfield 345/115kV Autotransformer Project | Reconductor 115kV C129 Line | Planned | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 887 | National Grid, USA | 09/2012 | 2012 | Auburn Area Transmission System Upgrades | Expand Auburn St Substation to include 2nd 345/115 kV autotransformer and 345 kV ring bus. | Planned | \$76,000,000 | \$76,000,000 |
| Reliability Upgrade | 1a | 921 | National Grid, USA | 06/2012 | 2012 | Auburn Area Transmission System Upgrades | Bridgewater substation - Upgrade Bus work and convert to BPS substation. | Planned | \$40,000,000 | \$40,000,000 |
| Reliability Upgrade | 1a | 919 | National Grid, USA | 12/2012 | 2012 | Auburn Area Transmission System Upgrades | Dupont substation - Upgrade Buswork and convert to BPS substation. | Planned | \$4,600,000 | \$4,600,000 |

Notes
 - Gray shading indicates change from JULY '08 Update.
 - All costs provided by Transmission Owners.

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|-----------------------------|---------------------------------|---------------------------|--|--|----------------|------------------------------|------------------------------|
| Reliability Upgrade | 1a | 840 | NSTAR Electric Company | 06/2012 | 2012 | Merrimack Valley/North Shore Reliability Project | Upgrade the 115 kV line (Line 423-515) from Mystic-Everett by adding a new parallel cable to the existing 115 kV cable. (NSTAR portion only) | Planned | \$7,300,000 | \$7,300,000 |
| Reliability Upgrade | 1a | 775 | National Grid, USA | 06/2012 | 2012 | Merrimack Valley/North Shore Reliability Project | Addition of 4 breakers and relocation of T1 and T2 into new bays at Sandy Pond. | Planned | \$20,100,000 | \$20,100,000 |
| Reliability Upgrade | 1a | 776 | National Grid, USA | 09/2012 | 2012 | Merrimack Valley/North Shore Reliability Project | Re-conductor O-167 (NGRID portion of Mystic - Everett) 115 kV line. | Planned | \$3,125,000 | \$3,125,000 |
| Reliability Upgrade | 1a | 59 | National Grid, USA | 06/2012 | 2012 | Auburn Reliability Transmission System Upgrades | G18, F19 line terminals 115kV upgrades at Bridgewater sub | Planned | Part of RSP 921 | Part of RSP 921 |
| Reliability Upgrade | 1a | 1068 | NSTAR Electric Company | 12/2012 | 2012 | Long Term Lower SEMA Upgrades | Install a new 345kV line from Carver to vicinity of Bourne and connect to existing #120 line and install a 345KV - 115kV auto-transformer at new substation about 3 miles west of the Barnstable Substation? | Planned | \$110,000,000 | \$110,000,000 |
| Reliability Upgrade | 1a | 592 | NSTAR Electric Company | 12/2012 | 2012 | Long Term Lower SEMA Upgrades | Separate existing 345kV double circuit Cape Cod Canal crossing | Planned | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1a | 1118 | NSTAR Electric Company | 12/2012 | 2012 | Long Term Lower SEMA Upgrades | Upgrade 115kV line D21 | Planned | Part of Long Term Lower SEMA | Part of Long Term Lower SEMA |
| Reliability Upgrade | 1a | 938 | National Grid, USA | 05/2012 | 2012 | Central/Western Massachusetts Upgrades | Deerfield - install a new 115/69KV autotransformer and a 69kV breaker and disconnect switches. | Planned | \$3,068,556 | \$3,068,556 |
| Reliability Upgrade | 1a | 941 | National Grid, USA | 06/2012 | 2012 | Central/Western Massachusetts Upgrades | Install new Z126 Millbury - Tower #510 115 kV line. | Planned | \$13,748,000 | \$13,748,000 |
| Reliability Upgrade | 1a | 946 | National Grid, USA | 12/2012 | 2012 | Central/Western Massachusetts Upgrades | Convert 69 kV (O-15S) Palmer - E Longmeadow - Shaker Rd line to 115 kV. | Planned | \$9,962,060 | \$9,962,060 |
| Reliability Upgrade | 1a | 947 | National Grid, USA | 12/2012 | 2012 | Central/Western Massachusetts Upgrades | Reconductor 115 kV line from Palmer to new Hampden Substation. | Planned | \$2,632,635 | \$2,632,635 |
| Reliability Upgrade | 1a | 948 | National Grid, USA | 12/2012 | 2012 | Central/Western Massachusetts Upgrades | Hampden - build new 115 kV substation at 1515/O-15S intersection (4 breaker ring). | Planned | \$5,649,430 | \$5,649,430 |
| Reliability Upgrade | 1a | 949 | National Grid, USA | 12/2012 | 2012 | Central/Western Massachusetts Upgrades | Palmer - add 115 kV breaker position for O15S conversion, includes thermal upgrade of W-175 bay. | Planned | \$1,500,000 | \$1,500,000 |
| Reliability Upgrade | 1a | 937 | National Grid, USA | 05/2012 | 2012 | Central/Western Massachusetts Upgrades | Bear Swamp - install one 230-115 kV 333 mVA auto, one 115 kV breaker and upgrade various terminal equipment. | Planned | \$6,602,875 | \$6,602,875 |
| Reliability Upgrade | 1a | 673 | National Grid, USA | 12/2012 | 2012 | Worcester Area Reinforcements | Add new 115kV bay to separate the M-165 & E-157 terminal at Millbury #2 Substation | Planned | \$2,200,000 | \$2,200,000 |
| Reliability Upgrade | 1a | 676 | National Grid, USA | 12/2012 | 2012 | Worcester Area Reinforcements | New Bloomingdale to Vernon Hill 115 kV (UG Cable-3.6 mi.) new 115kV breaker at Bloomingdale & Vernon Hill | Planned | \$30,000,000 | \$30,000,000 |
| Reliability Upgrade | 1a | 1065 | NSTAR Electric Company | 07/2012 | 2012 | NPCC BPS Compliance | Waltham Station | Planned | \$23,190,000 | \$23,190,000 |
| Reliability Upgrade | 1a | 1095 | National Grid, USA | 06/2012 | 2012 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV West Farnum Substation Equipment | Planned | \$73,800,000 | \$73,800,000 |
| Reliability Upgrade | 1a | 795 | National Grid, USA | 06/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | New Kent County to West Farnum 345kV line. | Planned | \$99,900,000 | \$99,900,000 |
| Reliability Upgrade | 1a | 1106 | National Grid, USA | 06/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | Installation of third 345/115kV autotransformer at Kent County. | Planned | Part of \$99,900,000 above | Part of \$99,900,000 above |
| Reliability Upgrade | 1a | 798 | National Grid, USA | 06/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | Upgrade of 115kV terminal equipment at Franklin Square. | Planned | \$4,900,000 | \$4,900,000 |
| Reliability Upgrade | 1a | 799 | National Grid, USA | 06/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | G-185N (Kent County-Drumrock) 115 kV reconductor. | Planned | \$4,500,000 | \$4,500,000 |
| Reliability Upgrade | 1a | 1096 | National Grid, USA | 05/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | Drumrock substation: Terminal equipment upgrades, Protection modifications and upgrades to meet BPS standards | Planned | \$12,000,000 | \$12,000,000 |
| Reliability Upgrade | 1a | 800 | National Grid, USA | 06/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | Reconductoring of short segments of S-171S, T-172N and T-172S with associated terminal equipment upgrades. | Planned | \$10,000,000 | \$10,000,000 |
| Reliability Upgrade | 1a | 1097 | National Grid, USA | 06/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | Relocate and Rebuild 115kV lines in the same ROW associated with new 345kV line from W. Farnum to Kent County | Planned | \$129,800,000 | \$129,800,000 |
| Reliability Upgrade | 1a | 1099 | National Grid, USA | 06/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | Hartford Ave 115kV terminal equipment upgrades | Planned | \$6,000,000 | \$6,000,000 |
| Reliability Upgrade | 1a | 1109 | National Grid, USA | 06/2012 | 2012 | NEEWS (Rhode Island Reliability Project) | South Wrentham 115kv terminal equipment upgrades | Planned | \$1,000,000 | \$1,000,000 |
| Reliability Upgrade | 1a | 976 | United Illuminating Company | 05/2012 | 2012 | | Grand Avenue 115 kV Switching Station Rebuild. | Planned | \$66,000,000 | \$66,000,000 |
| Reliability Upgrade | 1b | 148 | Central Maine Power Company | 06/2012 | 2012 | CMP LSP - Saco Bay Area Reinforcement Project | Establish a new Vallee Lane 115/34.5 kV substation and 115 kV line from Loudon S/S to Vallee Lane Substation. | Proposed | \$100,000 | \$100,000 |

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|-------------------------------|---------------------------------|---------------------------|---|---|----------------|---|---|
| Reliability Upgrade | 1b | 1136 | National Grid, USA | 12/2012 | 2012 | | New 115kV Switching Station at Devens Convert 69kV lines to 115kV, Reconfigure 115kV Supply at Ayer Substation | Proposed | \$9,200,000 | \$9,200,000 |
| Reliability Upgrade | 1b | 593 | NSTAR Electric Company | 2013 | 2013 | Mid Cape Reliability Project | Add a new 115 kV line from Canal to Barnstable/Falmouth | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1154 | Bangor Hydro-Electric Company | 12/2013 | 2013 | Maine Power Reliability Program (MPRP) | Rebuild Line 66 | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 1155 | Bangor Hydro-Electric Company | 12/2013 | 2013 | Maine Power Reliability Program (MPRP) | Capacitor Bank Addition (10 MVAR at Trenton and Epping) | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 843 | NSTAR Electric Company | 12/2013 | 2013 | Boston Area 115 kV Enhancements | Install (2) new 115 kV breakers at Trapelo Road. | Concept | TBD | TBD |
| Reliability Upgrade | 1a | 680 | National Grid, USA | 03/2013 | 2013 | | Rebuild Bellows Falls Substation and install 115 kV capacitor bank. | Planned | \$7,393,000 | \$7,393,000 |
| Reliability Upgrade | 1a | 674 | National Grid, USA | 12/2013 | 2013 | | Replace Comerford 230 kV breakers and add (1) 230 kV bus tie breaker. | Planned | \$22,115,000 | \$22,115,000 |
| Reliability Upgrade | 1a | 931 | National Grid, USA | 01/2013 | 2013 | Central/Western Massachusetts Upgrades | Park St. - incremental cost of designing for 115 kV instead of 69 kV. | Planned | \$531,481 | \$531,481 |
| Reliability Upgrade | 1a | 950 | National Grid, USA | 12/2013 | 2013 | Central/Western Massachusetts Upgrades | E Winchendon - install 115 kV breaker and 115 kV disconnect switch. | Planned | \$1,016,897 | \$1,016,897 |
| Reliability Upgrade | 1a | 953 | National Grid, USA | 12/2013 | 2013 | Central/Western Massachusetts Upgrades | Otter River - expand substation into 6-breaker ring bus with four 115 kV breakers and install two transformers. | Planned | \$10,248,067 | \$10,248,067 |
| Reliability Upgrade | 1a | 954 | National Grid, USA | 12/2013 | 2013 | Central/Western Massachusetts Upgrades | E Westminster - install new 115 kV breaker, including disconnect switches. Assumes no new control house. | Planned | \$903,909 | \$903,909 |
| Reliability Upgrade | 1a | 951 | National Grid, USA | 02/2013 | 2013 | Central/Western Massachusetts Upgrades | Install new Otter River - E Winchendon 115 kV line. | Planned | \$7,455,440 | \$7,455,440 |
| Reliability Upgrade | 1a | 687 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Fairmont 16H Substation Expansion | Planned | \$714,000,000 | \$714,000,000 |
| Reliability Upgrade | 1a | 826 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | South Agawam 42E Substation Reconfigure | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 196 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line (3216), Agawam (MA) - North Bloomfield (CT) | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 818 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Reconstruct a new 115kV line South Agawam to Southwick (1768) | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 819 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Build new 345kV line Ludlow - Agawam (3196) | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 820 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Expansion of Agawam 16C 115 kV Substation to include new 345 kV station with two 345/115-kV autotransformers. | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 823 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Ludlow 19S 345 kV Substation Expansion, two 345/115kV Autotransformers replacements. Add two 345kV 120 MVAR Capacitor additions | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 828 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Breckwood 115kV circuit 1322 Reactor Bypass and Open Breckwood Substation 1T breaker and maintain breaker in the normally open position | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 829 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Piper (1230) 115 kV line. | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1010 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Build 115-kV Cadwell switching 50F station. | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 259 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Cadwell to Orchard (1426) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 688 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Cadwell (1481) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1100 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to Chicopee (1314) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1101 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Orchard (1552) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |

2013 Concept 4

2013 Planned 58

2013 Proposed 6

2013 Under Constr 6

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|-----------------------------|---------------------------------|---------------------------|---|--|----------------|---|---|
| Reliability Upgrade | 1a | 1102 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Piper (1601) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1103 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Chicopee (1602) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1104 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Cadwell (1603) 115kV line and add 2nd High Speed Protection | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1105 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Fairmont to Shawinigan (1604) 115kV line and add a 2nd High Speed Protection | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1070 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1781) 115kV line and add a 2nd High Speed Protection | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1071 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Agawam to South Agawam (1782) 115kV line and add a 2nd High Speed Protection | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1072 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Rebuild Ludlow to Shawinigan (1845) 115kV line and add 2nd High Speed Protection | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1073 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Reterminate Cadwell to East Springfield (5001) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1074 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Reterminate Cadwell to East Springfield (5002) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1075 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Add 2nd high speed protection scheme to Agawam to Elm (1007) 115kV line if the Russell Biomass Plant, queue position #135 is constructed | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1078 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Pineshed (1327) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1079 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Add a 2nd high speed protection scheme to Fairmont to Mt. Tom (1428) 115kV line | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1080 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | Replace 4T and 6T 115kV circuit breaker to Shawinigan substation | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 190 | National Grid, USA | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | New Millbury to West Farnum (366) 345kV line. | Planned | \$69,600,000 | \$69,600,000 |
| Reliability Upgrade | 1a | 1094 | National Grid, USA | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Upgrade and expand the 345kV Millbury Substation equipment | Planned | \$25,000,000 | \$25,000,000 |
| Reliability Upgrade | 1a | 794 | National Grid, USA | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | New West Farnum to Connecticut/Rhode Island border (341) 345kV line (to Lake Road). | Planned | \$55,800,000 | \$55,800,000 |
| Reliability Upgrade | 1a | 796 | National Grid, USA | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | 347 Reconductor from Sherman Road to CT/RI Border. | Planned | \$16,400,000 | \$16,400,000 |
| Reliability Upgrade | 1a | 797 | National Grid, USA | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | 3361 Upgrade 345kV terminal equipment at Sherman Road. | Planned | \$8,300,000 | \$8,300,000 |
| Reliability Upgrade | 1a | 974 | United Illuminating Company | 04/2013 | 2013 | | East Shore 115 kV Oil Circuit Breaker & Disconnect Replacements. | Planned | \$6,700,000 | \$6,700,000 |
| Reliability Upgrade | 1a | 816 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Greater Springfield Reliability Project) | North Bloomfield 2A Substation Expansion - add a second 345/115-kV autotransformer | Planned | Part of NEEWS (Greater Springfield Reliability Project) | Part of NEEWS (Greater Springfield Reliability Project) |
| Reliability Upgrade | 1a | 1054 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Ancillary Greater Springfield Reliability Project) | Manchester - Meekeville Jct. line (395/1448) separation. | Planned | \$14,000,000 | \$14,000,000 |
| Reliability Upgrade | 1a | 576 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Central Connecticut Reliability Project) | Build new 345kV line (3208) North Bloomfield to Frost Bridge. | Planned | \$313,000,000 | \$313,000,000 |
| Reliability Upgrade | 1a | 1114 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Central Connecticut Reliability Project) | Frost Bridge 18R substation expansion - add a 345/115kV autotransformer. | Planned | Part of NEEWS (Central Connecticut Reliability Project) | Part of NEEWS (Central Connecticut Reliability Project) |
| Reliability Upgrade | 1a | 814 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Ancillary Central Connecticut Reliability Project) | Reconductor a portion of the Manchester to Scovill Rock 353 345-kV line and terminal work. | Planned | \$9,000,000 | \$9,000,000 |
| Reliability Upgrade | 1a | 802 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Build new 345kV line (3271) Card to Lake Road | Planned | \$251,000,000 | \$251,000,000 |
| Reliability Upgrade | 1a | 1084 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Loop the Millstone - Manchester (310) 345 kV line into the Card substation. | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1085 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Card 11F substation expansion | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1086 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to 115kV line 1704, SW Hartford to South Meadow | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1087 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to line 115kV 1722 SW Hartford NW Hartford | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1088 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Add 2nd high speed protection to 115kV line 1786, East Hartford to Riverside to South Meadow | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |

October '09 ISO-NEW ENGLAND Project Listing Update (DRAFT)

| Primary Driver | Part# | Project ID | Primary Equipment Owner | Projected In-Service Month/Year | Projected In-Service Year | Major Project | Project | Oct -09 Status | Oct-09 Estimated PTF Costs | |
|---------------------|-------|------------|--------------------------------|---------------------------------|---------------------------|---|--|----------------|---|---|
| Reliability Upgrade | 1a | 1089 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Killingly 3G substation 345kV breaker addition | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1090 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Millstone 15G substation breaker 14T upgrade 50kA | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 1091 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Southington 4C substation breaker 19T upgrade to 63kA | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 810 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Lake Road 27E 345 kV substation expansion | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 191 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Interstate Reliability Project) | Build Lake Road to Connecticut/Rhode Island border (341) 345-kV line (to West Farnum). | Planned | Part of NEEWS (Interstate Reliability Project) | Part of NEEWS (Interstate Reliability Project) |
| Reliability Upgrade | 1a | 807 | Northeast Utilities | 12/2013 | 2013 | NEEWS (Ancillary Interstate Reliability Project) | Install 480 MVAR's of capacitors at the Montville 345 kV substation | Planned | \$33,000,000 | \$33,000,000 |
| Reliability Upgrade | 1a | 1092 | Northeast Utilities | 12/2013 | 2013 | NEEWS (BPS) ² | Upgrade the Card 115 kV, East Hartford 115 kV, Agawam 115 kV, Barbour Hill 115 kV, and North Bloomfield 345 kV Substations to BPS standards. | Planned | \$37,000,000 | \$37,000,000 |
| Reliability Upgrade | 1b | 699 | United Illuminating Company | 12/2014 | 2014 | | Naugatuck Valley 115 kV reliability improvement. | Concept | \$11,100,000 | \$11,100,000 |
| Reliability Upgrade | 1a | 782 | National Grid, USA | 10/2014 | 2014 | Merrimack Valley/North Shore Reliability Project | Replace existing S145/T146 UG cables with higher capacity cables between Salem Harbor n Railyard. | Planned | \$43,912,000 | \$43,912,000 |
| Reliability Upgrade | 1a | 791 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | New 115 kV circuit between Somerset and Brayton Point. | Planned | \$11,560,000 | \$11,560,000 |
| Reliability Upgrade | 1a | 913 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | Brayton Point substation reinforcements to accommodate the new 115 kV line. | Planned | \$3,250,000 | \$3,250,000 |
| Reliability Upgrade | 1a | 914 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | New third circuit between Somerset and Bell Rock. | Planned | \$28,150,000 | \$28,150,000 |
| Reliability Upgrade | 1a | 915 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | Reconductor M13 and L14 between Bell Rock and Dexter + Reconductor 69 kV lines 61 and 62. | Planned | \$19,450,000 | \$19,450,000 |
| Reliability Upgrade | 1a | 916 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | Conversion of Jepson 69 kV substation to 115 kV substation. | Planned | \$11,800,000 | \$11,800,000 |
| Reliability Upgrade | 1a | 917 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | Bell Rock substation expansion. | Planned | \$7,000,000 | \$7,000,000 |
| Reliability Upgrade | 1a | 918 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | Dexter substation changes. | Planned | \$3,180,000 | \$3,180,000 |
| Reliability Upgrade | 1a | 792 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | Admiral St-Franklin Square (Q143 and R144) 115 kV UG recabling. | Planned | \$39,200,000 | \$39,200,000 |
| Reliability Upgrade | 1a | 793 | National Grid, USA | 12/2014 | 2014 | Greater Rhode Island Transmission Reinforcements ¹ | Somerset substation reinforcements. | Planned | \$6,400,000 | \$6,400,000 |
| Reliability Upgrade | 1b | 969 | NSTAR Electric Company | 06/2015 | 2015 | Boston Area 115 kV Enhancements | Add a new 54 MVAR capacitor bank at Chelsea. | Concept | \$2,780,000 | \$2,780,000 |
| Reliability Upgrade | 1b | 956 | National Grid, USA | 01/2015 | 2015 | Central/Western Massachusetts Upgrades | Carpenter Hill - replace one 345 kV, 448 MVA autotransformer and upgrade thermal rating of bus to at least 580 MVA. | Concept | \$7,021,534 | \$7,021,534 |
| Reliability Upgrade | 1b | 975 | United Illuminating Company | 06/2015 | 2015 | | Pequonnock 115 kV Fault Duty Mitigation. | Concept | \$65,000,000 | \$65,000,000 |
| Reliability Upgrade | 1a | 1141 | Northeast Utilities | 2015 | 2015 | 2nd Deerfield 345/115kV Autotransformer Project | Rochester Substation Upgrades | Planned | Part of 2nd Deerfield 345/115kV Autotransformer Project | Part of 2nd Deerfield 345/115kV Autotransformer Project |
| Reliability Upgrade | 1a | 139 | Vermont Electric Power Company | 12/2015 | 2015 | Northwest Vermont Reliability Project | Granite Sub Upgrade Phase 2: synchronous condensers expanded to +200/- 100 MVAR and two 25 MVAR capacitor banks. | Planned | \$20,000,000 | \$20,000,000 |
| Reliability Upgrade | 1a | 721 | United Illuminating Company | 06/2016 | 2016 | | New Shelton 115/13.8 kV substation | Planned | \$19,500,000 | \$19,500,000 |
| Reliability Upgrade | 1b | 785 | National Grid, USA | 07/2017 | 2017 | Merrimack Valley/North Shore Reliability Project | Re-conductor F-158N (Golden Hills-Maplewood-Everett) 115 kV line. | Concept | \$1,330,000 | \$1,330,000 |
| Reliability Upgrade | 1b | 824 | Northeast Utilities | TBD | TBD | Pittsfield / Greenfield Project | Reconductor the Woodland to Pleasant 1371 115-kV line and terminal work at Woodland substation. | Concept | TBD | TBD |
| Reliability Upgrade | 1b | 825 | Northeast Utilities | TBD | TBD | Pittsfield / Greenfield Project | Upgrade the Pleasant to Blanford 115-kV line and the Blanford to Granville Jct. portion of the 115-kV line 1512. | Concept | TBD | TBD |

2014 Concept 1
 2014 Planned 10
 2014 Proposed 0
 2014 Under Const 0

Notes
 - Gray shading indicates change from JULY '08 Update.
 - All costs provided by Transmission Owners.

October 2018 ISO-NEW ENGLAND ASSET Condition Update (Final) - ISO-NE Public

| Primary Driver | Section # | Asset Condition ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Footnote Number | Projected In-Service Month/Year | Asset Condition Grouping | Description | Mar-16 Status | Jun-16 Status | Oct-16 Status | Mar-17 Status | Jun-17 Status | Oct-17 Status | Mar-18 Status | Jun-18 Status | Oct-18 Status | Is the project Grandfathered on May 18, 2015 | PPA (1.3.9) Approval | TCA Approval | Mar-16 Estimated PTF Costs | Jun-16 Estimated PTF Costs | Oct-16 Estimated PTF Costs |
|------------------------|-----------|--------------------|-------|--------------------------------|--------------------------|-----------------|---------------------------------|---------------------------------|--|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--|----------------------|--------------|----------------------------|----------------------------|----------------------------|
| Asset Condition | | | | | | | | | | | | | | | | | | | | | | | | |
| Table A | | | | | | | | | | | | | | | | | | | | | | | | |
| Maine | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Condition | 1a | 23 | ME | MEPCO | | | 06/2019 | | Section 388 & 3023 Structure Replacement | | | | Planned | Planned | Under Construction | Under Construction | Under Construction | Under Construction | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 24 | ME | MEPCO | | | 12/2018 | | Section 396 & 3001 Structure Replacement | | | | Planned | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Not Applicable | NR | No | | | |
| New Hampshire | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Condition | 1a | 85 | NH | New Hampshire Transmission | | | 12/2019 | | Seabrook 345 kV GIS Switchyard Like-for-Like Equipment Replacement Phase 1 of multi-phase project involving like for like equipment replacement. Phase 1 includes replacing three approximately 1,000 ft. long horizontal gas-insulated lines (GIL) comprising the three phases of the 345kV Seabrook-to-Timberswamp 369 line. Post-top insulators for the 369 line located in the open-air to GIS transition yard will also be replaced. A bridge covering the GILs was they surface from below grade upon entering the GIS Switchyard will also be replaced during this phase. | | | | | | | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 86 | NH | New Hampshire Transmission | | | 12/2020 | | Seabrook 345 kV GIS Switchyard Phase 2 Equipment Replacement Part of Asset Condition #85 Phase 2 of multi-phase project involving like for like equipment replacement. Phase 2 includes replacing three approximately 1,000 ft. long horizontal gas-insulated lines (GIL) comprising the three phases of the 345kV Seabrook-to-Ward Hill 394 line, and replacing two GIS 345kV Circuit Breakers and related switches that are the 394 line termination equipment. Post-top insulators for the 394 line located in the open-air to GIS transition yard will also be replaced. Phase 2 also includes replacing Breaker Failure Relay Protection Systems for the 394 line. | | | | | | | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 87 | NH | New Hampshire Transmission | | | 12/2021 | | Seabrook 345 kV GIS Switchyard Phase 3 Equipment Replacement Part of Asset Condition #85 Phase 3 of multi-phase project involving like for like equipment replacement. Phase 3 includes replacing three approximately 1,000 ft. long horizontal gas-insulated lines (GIL) comprising the three phases of the 345kV Seabrook-to-Scobie Pond 363 line, and replacing two GIS 345kV Circuit Breakers and related switches that are the 363 line termination equipment. Post-top insulators located in the open-air to GIS transition yard will also be replaced. Phase 3 also includes replacing Breaker Failure Relay Protection Systems for the 363 line. | | | | | | | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 52 | NH | Eversource | | | 11/2018 | | Eversource Energy Autotransformer Replacement Plan Replace the Littleton TB-41 autotransformer and bus upgrades to accommodate new transformer specifications | | | | | | Proposed | Proposed | Planned | Under Construction | Not Applicable | 1/29/2018 | NR | | | |
| Vermont | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Condition | 1a | 11 | VT | Vermont Electric Power Company | | | 12/2018 | Structure Condition Improvement | Replacement of 115 kV, 230 kV and 345 kV structures as part of the VELCO asset maintenance activities addressing our aging and degrading transmission line infrastructure. 100 to 300 structures will be replaced every year based on outage availability | | | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Not Applicable | NR | No | \$185,000,000 | \$185,000,000 |
| Massachusetts | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Condition | 1a | 15 | MA | Eversource | | | 06/2019 | | Install a new Medway control house which is to be built to BPS standards in a location within the existing station footprint. | | | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Under Construction | Not Applicable | 1/26/2016 | 7/17/2017 | | \$11,800,000 |
| Asset Condition | 1a | 32 | MA | Eversource | | | 12/2020 | | West Medway Substation #446 Asset Condition Upgrade | | | | | Proposed | Proposed | Under Construction | Under Construction | Under Construction | Not Applicable | NR | 12/1/2017 | | | |
| Asset Condition | 1a | 37 | MA | Eversource | | | 10/2018 | | New Mt. Tom protection system control house | | | | | Proposed | Proposed | Under Construction | Under Construction | Under Construction | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 42 | MA | Eversource | | | 12/2020 | | Brighton #329 115-kV Control House | | | | | | Proposed | Under Construction | Under Construction | Under Construction | Not Applicable | NR | 4/17/2018 | | | |
| Asset Condition | 1a | 43 | MA | Eversource | | | 12/2021 | | K Street #385 115-kV Control House | | | | | | | Proposed | Under Construction | Under Construction | Under Construction | Not Applicable | NR | 4/17/2018 | | |

October 2018 ISO-NEW ENGLAND ASSET Condition Update (Final) - ISO-NE Public

| Primary Driver | Section # | Asset Condition ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Footnote Number | Projected In-Service Month/Year | Asset Condition Grouping | Description | Mar-16 Status | Jun-16 Status | Oct-16 Status | Mar-17 Status | Jun-17 Status | Oct-17 Status | Mar-18 Status | Jun-18 Status | Oct-18 Status | Is the project Grandfathered on May 18, 2015 | PPA (I.3.9) Approval | TCA Approval | Mar-16 Estimated PTF Costs | Jun-16 Estimated PTF Costs | Oct-16 Estimated PTF Costs |
|-----------------|-----------|--------------------|-------|-------------------------|--------------------------|-----------------|---------------------------------|--|--|---------------|---------------|---------------|---------------|---------------|---------------|--------------------|--------------------|--------------------|--|----------------------|--------------|----------------------------|----------------------------|----------------------------|
| Asset Condition | 1a | 44 | MA | Eversource | | | 12/2024 | | Mystic #250 115-kV Control House | | | | | | Proposed | Under Construction | Under Construction | Under Construction | Not Applicable | NR | 4/17/2018 | | | |
| Asset Condition | 1a | 53 | MA | National Grid, USA | | | 12/2021 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 2 | | | | | | | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 88 | MA | National Grid, USA | | | 11/2019 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 1 | | | | | | | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 26 | MA | Eversource | | | 12/2020 | | Rebuild Bourne Substation as a breaker and one half scheme | | | | Proposed | Proposed | Proposed | Proposed | Planned | Planned | Not Applicable | 4/30/2018 | No | | | |
| Asset Condition | 1a | 27 | MA | Eversource | | | 12/2021 | | Kingston Substation #735 Asset Condition Replacement | | | | Proposed | Proposed | Proposed | Proposed | Planned | Planned | Not Applicable | 4/30/2018 | No | | | |

Connecticut

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|-----------------------------|--|--|---------|--|--|--|--|---------|---------|---------|----------|--------------------|--------------------|--------------------|--------------------|----------------|----|-----------|--|--------------|
| Asset Condition | 1a | 68 | CT | Eversource | | | 12/2019 | | Card-Montville-Tunnel Corridor Asset Condition and OPGW Installation Project | | | | | | | Under Construction | Under Construction | Under Construction | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 17 | CT | United Illuminating Company | | | 01/2020 | | East Shore 345 kV circuit switcher replacement project. Replace 345 kV circuit switchers with dead tank breakers | | | Planned | Planned | Planned | Planned | Planned | Planned | Planned | Not Applicable | 7/19/2016 | No | | | \$10,931,000 |
| Asset Condition | 1a | 18 | CT | United Illuminating Company | | | 01/2020 | UI Coastal Substation Flood Mitigation Study Project | East Shore - Raising Impacted 115 kV Equipment | | | | Planned | Planned | Planned | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 19 | CT | United Illuminating Company | | | 12/2021 | UI Coastal Substation Flood Mitigation Study Project | Congress 115 kV Substation Flood Wall | | | | Planned | Planned | Planned | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 20 | CT | United Illuminating Company | | | 03/2022 | UI Coastal Substation Flood Mitigation Study Project | Grand Avenue - Mill River 115 kV Substation Flood Wall | | | | Planned | Planned | Planned | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 21 | CT | United Illuminating Company | | | 09/2022 | UI Coastal Substation Flood Mitigation Study Project | Singer 345kV Substation Flood Wall | | | | Planned | Planned | Planned | Planned | Planned | Planned | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 22 | CT | United Illuminating Company | | | 12/2022 | UI Coastal Substation Flood Mitigation Study Project | Pequonnock 115kV Substation rebuild with a new substation adjacent to the existing one | | | | Planned | Planned | Planned | Planned | Planned | Planned | Not Applicable | 12/28/2016 | No | | | |
| Asset Condition | 1a | 34 | CT | Eversource | | | 12/2018 | | Devon Control House Modifications | | | | | | Proposed | Proposed | Proposed | Under Construction | Under Construction | Not Applicable | NR | 4/17/2018 | | |
| Asset Condition | 1a | 50 | CT | Eversource | | | 12/2018 | Eversource Energy Autotransformer Replacement Plan | Replace the Card 11F-5X autotransformer. Foundation and bus upgrades to accommodate new transformer specifications | | | | | | Proposed | Proposed | Planned | Planned | Not Applicable | 5/16/2018 | No | | | |
| Asset Condition | 1a | 89 | CT | Eversource | | | 12/2019 | | Replacement of Montville 16X Transformer | | | | | | | | Planned | Planned | Not Applicable | 5/16/2018 | No | | | |

Rhode Island

October 2018 ISO-NEW ENGLAND ASSET Condition Update (Final) - ISO-NE Public

| Primary Driver | Section # | Asset Condition ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Footnote Number | Projected In-Service Month/Year | Asset Condition Grouping | Description | Mar-16 Status | Jun-16 Status | Oct-16 Status | Mar-17 Status | Jun-17 Status | Oct-17 Status | Mar-18 Status | Jun-18 Status | Oct-18 Status | Is the project Grandfathered on May 18, 2015 | PPA (L3.9) Approval | TCA Approval | Mar-16 Estimated PTF Costs | Jun-16 Estimated PTF Costs | Oct-16 Estimated PTF Costs |
|-----------------|-----------|--------------------|-------|-------------------------|--------------------------|-----------------|---------------------------------|--|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|---------------------|--------------|----------------------------|----------------------------|----------------------------|
| Asset Condition | 1a | 54 | RI | National Grid, USA | | | 10/2019 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 1 | | | | | | | Planned | Planned | Planned | Not Applicable | NR | No | | | |

**Table B
Maine
New Hampshire**

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|--------------------|--|--|---------|--|--|--|--|--|--|--|--|----------|----------|----------|----------------|----|----|--|--|--|
| Asset Condition | 1b | 55 | NH | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 307 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 56 | NH | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 326 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 57 | NH | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 367 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 58 | NH | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 379 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 59 | NH | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 381 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 60 | NH | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 391 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 97 | NH | National Grid, USA | | | 05/2022 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 3 | | | | | | | | | Concept | Not Applicable | NR | No | | | |

Vermont

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|--------------------|--|--|---------|--|--|--|--|--|--|--|--|--|--|---------|----------------|----|----|--|--|--|
| Asset Condition | 1a | 93 | VT | National Grid, USA | | | 06/2024 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 4 | | | | | | | | | Concept | Not Applicable | NR | No | | | |
|-----------------|----|----|----|--------------------|--|--|---------|--|--|--|--|--|--|--|--|--|--|---------|----------------|----|----|--|--|--|

Massachusetts

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|------------|--|--|---------|--|---|--|--|--|--|--|--|----------|----------|----------|----------------|----|----|--|--|--|
| Asset Condition | 1b | 62 | MA | Eversource | | | 04/2019 | | Oil Circuit Breaker Replacement Project at the Agawam Substation | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 63 | MA | Eversource | | | 12/2021 | | Lexington Station #320 Asset Condition Upgrade Project | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 64 | MA | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 393 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 65 | MA | Eversource | | | 12/2020 | | Eversource Laminated Structure Replacement Project - Line 1512 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 66 | MA | Eversource | | | 12/2020 | | Eversource Laminated Structure Replacement Project - Line 1211/1161 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |

October 2018 ISO-NEW ENGLAND ASSET Condition Update (Final) - ISO-NE Public

| Primary Driver | Section # | Asset Condition ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Footnote Number | Projected In-Service Month/Year | Asset Condition Grouping | Description | Mar-16 Status | Jun-16 Status | Oct-16 Status | Mar-17 Status | Jun-17 Status | Oct-17 Status | Mar-18 Status | Jun-18 Status | Oct-18 Status | Is the project Grandfathered on May 18, 2015 | PPA (L3.9) Approval | TCA Approval | Mar-16 Estimated PTF Costs | Jun-16 Estimated PTF Costs | Oct-16 Estimated PTF Costs |
|-----------------|-----------|--------------------|-------|-------------------------------|--------------------------|-----------------|---------------------------------|--|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|---------------------|--------------|----------------------------|----------------------------|----------------------------|
| Asset Condition | 1b | 25 | MA | Taunton Municipal Light Plant | | | 11/2019 | | Clary 115 kv ring bus asset replacement - replace existing ring bus with new 115 kv switching station on an adjacent site and reconnect lines and transformers | | | | Proposed | Proposed | Proposed | Proposed | Proposed | Proposed | Not Applicable | NR | NR | | | |
| Asset Condition | 1b | 28 | MA | Eversource | | | 12/2021 | | 115 kv GIS breaker replacement at Kingston Street Substation | | | | Proposed | Proposed | Proposed | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 90 | MA | Eversource | | | 12/2021 | | Canal Station #980 BPS and Asset Condition Upgrade Project | | | | | | | | | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 92 | MA | National Grid, USA | | | 09/2022 | | Robinson Avenue Station #102 Asset Condition Upgrades | | | | | | | | | Proposed | Not Applicable | No | No | | | |
| Asset Condition | 1a | 94 | MA | National Grid, USA | | | 11/2023 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 5 | | | | | | | | | Concept | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 95 | MA | National Grid, USA | | | 06/2024 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 4 | | | | | | | | | Concept | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 96 | MA | National Grid, USA | | | 05/2022 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 3 | | | | | | | | | Concept | Not Applicable | NR | No | | | |

Connecticut

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|------------|--|--|---------|--|--|--|--|--|--|--|--|--|----------|----------|----------|----------------|----|-----------|--|--|--|
| Asset Condition | 1b | 67 | CT | Eversource | | | 12/2019 | | Manchester Control House Expansion | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 69 | CT | Eversource | | | 12/2018 | | Oil Circuit Breaker Replacement Project at the Frost Bridge Substation | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | 8/24/2018 | | | |
| Asset Condition | 1b | 70 | CT | Eversource | | | 12/2020 | | Oil Circuit Breaker Replacement Project at the Plumtree Substation | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 71 | CT | Eversource | | | 12/2018 | | Eversource 345 kv Structure Replacement Project - Line 310 | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 72 | CT | Eversource | | | 12/2018 | | Eversource 345 kv Structure Replacement Project - Line 321 | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 73 | CT | Eversource | | | 12/2018 | | Eversource 345 kv Structure Replacement Project - Line 330 | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 74 | CT | Eversource | | | 12/2018 | | Eversource 345 kv Structure Replacement Project - Line 348 | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 75 | CT | Eversource | | | 12/2018 | | Eversource 345 kv Structure Replacement Project - Line 364 | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 76 | CT | Eversource | | | 12/2018 | | Eversource 345 kv Structure Replacement Project - Line 371 | | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |

October 2018 ISO-NEW ENGLAND ASSET Condition Update (Final) - ISO-NE Public

| Primary Driver | Section # | Asset Condition ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Footnote Number | Projected In-Service Month/Year | Asset Condition Grouping | Description | Mar-16 Status | Jun-16 Status | Oct-16 Status | Mar-17 Status | Jun-17 Status | Oct-17 Status | Mar-18 Status | Jun-18 Status | Oct-18 Status | Is the project Grandfathered on May 18, 2015 | PPA (I.3.9) Approval | TCA Approval | Mar-16 Estimated PTF Costs | Jun-16 Estimated PTF Costs | Oct-16 Estimated PTF Costs |
|-----------------|-----------|--------------------|-------|-----------------------------|--------------------------|-----------------|---------------------------------|--------------------------|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|----------------------|--------------|----------------------------|----------------------------|----------------------------|
| Asset Condition | 1b | 77 | CT | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 383 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 78 | CT | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 387 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 79 | CT | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 398 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 80 | CT | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 3041 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 81 | CT | Eversource | | | 12/2018 | | Eversource 345 kV Structure Replacement Project - Line 3642 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 82 | CT | Eversource | | | 12/2020 | | Eversource Laminated Structure Replacement Project - Line 1505/1607 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 83 | CT | Eversource | | | 12/2020 | | Eversource Laminated Structure Replacement Project - Line 1675/1080 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 84 | CT | Eversource | | | 12/2020 | | Eversource Laminated Structure Replacement Project - Line 1921 | | | | | | | Proposed | Proposed | Proposed | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 47 | CT | Eversource | | | 06/2019 | | Southern CT Loop Line Structure Replacements - 1342 115-kV | | | | | | | Proposed | Proposed | Proposed | Proposed | Not Applicable | NR | No | | |
| Asset Condition | 1b | 49 | CT | Eversource | | | 12/2019 | | Southern CT Loop Line Structure Replacements - 1655 115-kV | | | | | | | Proposed | Proposed | Proposed | Proposed | Not Applicable | NR | No | | |
| Asset Condition | 1b | 91 | CT | United Illuminating Company | | | 12/2028 | | Railroad Corridor Transmission Line Asset Condition Upgrades | | | | | | | | | Proposed | Not Applicable | NR | No | | | |

Rhode Island

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|--------------------|--|--|---------|--|--|--|--|--|--|--|--|--|--|---------|----------------|----|----|--|--|--|
| Asset Condition | 1a | 98 | RI | National Grid, USA | | | 11/2023 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 5 | | | | | | | | | Concept | Not Applicable | NR | No | | | |
| Asset Condition | 1a | 99 | RI | National Grid, USA | | | 06/2024 | NPCC Directory #1 Protection Modifications | NPCC Directory #1 Protection Modifications - Phase 4 | | | | | | | | | Concept | Not Applicable | NR | No | | | |

In-service Vermont

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|---|----|--------------------------------|--|--|---------|-----------------------------|--|----------|----------|----------|----------|------------|------------|------------|------------|------------|----------------|----|----|--------------|--------------|--------------|
| Asset Condition | 1a | 3 | VT | Vermont Electric Power Company | | | 05/2017 | Essex STATCOM Refurbishment | Replace Essex STATCOM power electronics and controls | Proposed | Proposed | Proposed | Proposed | In-service | In-service | In-service | In-service | In-service | Not Applicable | No | No | \$27,850,000 | \$27,850,000 | \$27,850,000 |
|-----------------|----|---|----|--------------------------------|--|--|---------|-----------------------------|--|----------|----------|----------|----------|------------|------------|------------|------------|------------|----------------|----|----|--------------|--------------|--------------|

New Hampshire

October 2018 ISO-NEW ENGLAND ASSET Condition Update (Final) - ISO-NE Public

| Primary Driver | Section # | Asset Condition ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Footnote Number | Projected In-Service Month/Year | Asset Condition Grouping | Description | Mar-16 Status | Jun-16 Status | Oct-16 Status | Mar-17 Status | Jun-17 Status | Oct-17 Status | Mar-18 Status | Jun-18 Status | Oct-18 Status | Is the project Grandfathered on May 18, 2015 | PPA (I.3.9) Approval | TCA Approval | Mar-16 Estimated PTF Costs | Jun-16 Estimated PTF Costs | Oct-16 Estimated PTF Costs |
|-----------------|-----------|--------------------|-------|----------------------------|--------------------------|-----------------|---------------------------------|---|--|---------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|--|----------------------|--------------|----------------------------|----------------------------|----------------------------|
| Asset Condition | 1a | 51 | NH | Eversource | | | 07/2018 | Eversource Energy Autotransformer Replacement Plan | Replace the Deerfield TB-14 autotransformer and bus upgrades to accommodate new transformer specifications | | | | | | Proposed | Proposed | Planned | In-service | Not Applicable | 1/29/2018 | No | | | |
| Asset Condition | 1a | 36 | NH | Eversource | | | 03/2018 | | Install two 40 MVAR reactors on the Scobie 115 kV bus, to accommodate the loss of the reactors connected on the 13.8 kV tertiary winding of the TB30 transformer | | | | | Planned | Under Construction | Under Construction | In-service | In-service | Not Applicable | 5/24/2017 | 8/24/2018 | | | |
| Asset Condition | 1a | 5 | NH | New Hampshire Transmission | | | 11/2017 | Seabrook 345 kV GIS Breaker Removal and Bus Upgrade | Phase 2 - Remove Breaker 11 and upgrade sections of Bus 1 | Proposed | Planned | Planned | Under Construction | Under Construction | Under Construction | In-service | In-service | In-service | Not Applicable | 2/23/2016 | No | \$4,271,787 | \$4,271,787 | \$4,271,787 |
| Asset Condition | 1a | 35 | NH | Eversource | | | 06/2017 | | Scobie Pond TB30 345/115 kV transformer replacement project | | | | | Under Construction | In-service | In-service | In-service | In-service | Not Applicable | 5/24/2017 | 8/24/2018 | | | |
| Asset Condition | 1a | 4 | NH | New Hampshire Transmission | | | 11/2016 | Seabrook 345 kV GIS Breaker Removal and Bus Upgrade | Phase 1 - Remove Breaker 22, remove Bus 4 and upgrade sections of Bus 2 | Proposed | Planned | Planned | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | 2/23/2016 | No | \$5,140,351 | \$5,140,351 | \$5,140,351 |

Connecticut

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|------------|--|--|---------|--|--|------------|------------|------------|--------------------|--------------------|------------|--------------------|--------------------|------------|----------------|----|------------|-------------|-------------|---------------------------------|
| Asset Condition | 1a | 48 | CT | Eversource | | | 07/2018 | | Southern CT Loop Line Structure Replacements - 1508 115 kV | | | | | | Proposed | Under Construction | Under Construction | In-service | Not Applicable | NR | 8/24/2018 | | | |
| Asset Condition | 1b | 46 | CT | Eversource | | | 12/2017 | | Southern CT Loop Line Structure Replacements - 1261/1598 115-kV | | | | | | Proposed | In-service | In-service | In-service | Not Applicable | NR | 4/17/2018 | | | |
| Asset Condition | 1b | 33 | CT | Eversource | | | 06/2017 | | 1410 and 100 Line Structure Replacements | | | | | Proposed | Proposed | In-service | In-service | In-service | Not Applicable | NR | 12/1/2017 | | | |
| Asset Condition | 1b | 39 | CT | Eversource | | | 11/2017 | | 3419 line (portion in Connecticut) asset condition and OPGW project | | | | | Proposed | Proposed | In-service | In-service | In-service | Not Applicable | NR | 1/2/2018 | | | |
| Asset Condition | 1a | 29 | CT | Eversource | | | 09/2017 | | 1620/1975 line structure replacement | | | | Under Construction | Under Construction | In-service | In-service | In-service | In-service | Not Applicable | NR | 12/1/2017 | | | |
| Asset Condition | 1a | 30 | CT | Eversource | | | 12/2016 | | 3424 line Asset Condition and Storm Hardening | | | | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 1/3/2018 | | | |
| Asset Condition | 1a | 16 | CT | Eversource | | | 06/2016 | | 3419 line (portion in Connecticut) asset condition and storm hardening. Asset condition - replace 24 wood poles H-frame with direct embed steel wood pole equivalent or wood located in MA & CT. | | | In-service | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 1/3/2018 | | | Cost part of Asset Condition #1 |
| Asset Condition | | 6 | CT | Eversource | | | 09/2014 | | 1570 line clearance remediation. Devon S/S to Beacon Falls S/S. 31 conductor span locations were found to have NESC clearance discrepancies. | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 12/16/2016 | \$6,500,000 | \$6,500,000 | \$6,500,000 |

Massachusetts

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|--------------------|--|---|---------|--|---|--|--|--|--|---------|--------------------|--------------------|--------------------|------------|----------------|----|-----------|--|--|--|
| Asset Condition | 1a | 45 | MA | Eversource | | | 07/2018 | | 345 kV 354 Line Structure Replacements | | | | | | Under Construction | Under Construction | Under Construction | In-service | Not Applicable | NR | 7/17/2017 | | | |
| Asset Condition | 1a | 40 | MA | National Grid, USA | | 1 | 05/2018 | | Salem Harbor Substation - 115 kV oil circuit breaker replacements | | | | | Planned | Under Construction | Under Construction | In-service | In-service | Not Applicable | NR | NR | | | |

October 2018 ISO-NEW ENGLAND ASSET Condition Update (Final) - ISO-NE Public

| Primary Driver | Section # | Asset Condition ID | State | Primary Equipment Owner | Other Equipment Owner(s) | Footnote Number | Projected In-Service Month/Year | Asset Condition Grouping | Description | Mar-16 Status | Jun-16 Status | Oct-16 Status | Mar-17 Status | Jun-17 Status | Oct-17 Status | Mar-18 Status | Jun-18 Status | Oct-18 Status | Is the project Grandfathered on May 18, 2015 | PPA (L3.9) Approval | TCA Approval | Mar-16 Estimated PTF Costs | Jun-16 Estimated PTF Costs | Oct-16 Estimated PTF Costs |
|-----------------|-----------|--------------------|-------|-------------------------|--------------------------|-----------------|---------------------------------|----------------------------------|--|--------------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|--|---------------------|--------------|----------------------------|----------------------------|----------------------------|
| Asset Condition | 1b | 61 | MA | Eversource | | | 09/2017 | | 1231/1242 Structure Replacement Project | | | | | | | Proposed | In-service | In-service | Not Applicable | NR | No | | | |
| Asset Condition | 1b | 38 | MA | Eversource | | | 12/2017 | | 3419 line (portion in Massachusetts) asset condition and OPGW project | | | | | Proposed | Proposed | In-service | In-service | In-service | Not Applicable | NR | 1/3/2018 | | | |
| Asset Condition | 1a | 41 | MA | Eversource | | | 06/2013 | | Scotia Street Substation Project | | | | | | In-service | In-service | In-service | In-service | Not Applicable | NR | 7/17/2017 | | | |
| Asset Condition | 1a | 12 | MA | Eversource | | | 07/2017 | | Doreen-Oswald Jct. 1211 115 kV Line Structure Replacement | | Proposed | Proposed | Proposed | Under Construction | In-service | In-service | In-service | In-service | Not Applicable | NR | 1/3/2018 | | \$14,800,000 | \$14,800,000 |
| Asset Condition | 1a | 31 | MA | Eversource | | | 05/2016 | | 345 kV GIS breaker replacements at Kingston Street #514 | | | | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 5/11/2018 | | | |
| Asset Condition | 1b | 13 | MA | Eversource | | | 01/2017 | | Ludlow-Thordike-Palmer (WMA portion) of the X176 115 KV Line Rebuild | | Proposed | Proposed | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 12/16/2016 | | \$14,900,000 | \$8,928,000 |
| Asset Condition | 1a | 2 | MA | National Grid, USA | | | 10/2016 | Crystal Lake Substation Upgrades | Crystal Lake Substation Upgrades | Under Construction | Under Construction | Under Construction | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | 5/5/2016 | No | \$6,950,000 | \$6,950,000 | \$6,950,000 |
| Asset Condition | 1a | 1 | MA | Eversource | | | 06/2016 | | 3419 line (portion in Massachusetts) asset condition and storm hardening. Asset condition - replace 24 wood poles H-frame with direct embed steel wood pole equivalent or wood located in MA & CT. | Under Construction | Under Construction | In-service | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 01/03/2018 | \$14,500,000 | \$14,500,000 | \$11,014,000 |
| Asset Condition | 1a | 14 | MA | Eversource | | | 12/2015 | | 1231/1242 Line Clearance remediation Project | | | In-service | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 12/16/2016 | | | \$13,804,000 |
| Asset Condition | | 7 | MA | Eversource | | | 12/2015 | | 115 kV line 136 Falmouth Tap - West Barnstable Complete structure replacements | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 11/25/2015 | \$20,270,000 | \$20,270,000 | \$20,270,000 |
| Asset Condition | | 8 | MA | Eversource | | | 05/2015 | | 381 Line Structure Replacements | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 11/25/2015 | \$14,150,000 | \$14,150,000 | \$14,150,000 |
| Asset Condition | | 9 | MA | Eversource | | | 12/2015 | | 354 Line Structure Replacements | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 11/25/2015 | \$13,517,000 | \$13,517,000 | \$13,517,000 |
| Asset Condition | | 10 | MA | Eversource | | | 07/2014 | | 312 Line Structure Replacements | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | In-service | Not Applicable | NR | 11/25/2015 | \$8,125,000 | \$8,125,000 | \$8,125,000 |

| Mar-17 Estimated PTF Costs | Jun-17 Estimated PTF Costs | Oct-17 Estimated PTF Costs | Mar-18 Estimated PTF Costs | Jun-18 Estimated PTF Costs | Oct-18 Estimated PTF Costs |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|

| | | | | | |
|---------------|---------------|---------------|--------------|--------------|--------------|
| \$101,600,000 | \$101,600,000 | \$101,600,000 | \$82,400,000 | \$72,900,000 | \$72,900,000 |
| \$16,900,000 | \$16,900,000 | \$16,900,000 | \$16,900,000 | \$16,000,000 | \$16,000,000 |

| | | | | | |
|--|--|-------------|---------------------|---------------------|---------------------|
| | | | \$77,017,000 | \$77,017,000 | \$87,421,778 |
| | | | Part of Project #86 | Part of Project #86 | Part of Project #85 |
| | | | Part of Project #86 | Part of Project #86 | Part of Project #85 |
| | | \$6,200,000 | \$3,891,000 | \$3,891,000 | \$4,331,000 |

| | | | | | |
|---------------|---------------|---------------|---------------|---------------|---------------|
| \$185,000,000 | \$160,200,000 | \$160,200,000 | \$160,200,000 | \$160,200,000 | \$158,000,000 |
|---------------|---------------|---------------|---------------|---------------|---------------|

| | | | | | |
|--------------|--------------|--------------|--------------|--------------|--------------|
| \$11,800,000 | \$12,287,000 | \$12,287,000 | \$12,287,000 | \$12,287,000 | \$12,287,000 |
| | \$18,900,000 | \$18,900,000 | \$18,870,000 | \$18,870,000 | \$18,870,000 |
| | \$7,700,000 | \$7,700,000 | \$7,700,000 | \$7,700,000 | \$7,700,000 |
| | | \$21,000,000 | \$21,000,000 | \$21,000,000 | \$21,000,000 |
| | | \$18,402,000 | \$18,402,000 | \$18,402,000 | \$18,402,000 |

| Mar-17 Estimated PTF Costs | Jun-17 Estimated PTF Costs | Oct-17 Estimated PTF Costs | Mar-18 Estimated PTF Costs | Jun-18 Estimated PTF Costs | Oct-18 Estimated PTF Costs |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | | \$23,900,000 | \$23,900,000 | \$23,900,000 | \$23,900,000 |
| | | | \$12,353,000 | \$12,353,000 | \$11,353,000 |
| | | | \$1,384,000 | \$1,384,000 | \$2,364,000 |
| \$37,000,000 | \$37,000,000 | \$37,000,000 | \$37,000,000 | \$37,000,000 | \$37,000,000 |
| \$6,500,000 | \$6,500,000 | \$6,500,000 | \$6,500,000 | \$6,500,000 | \$6,500,000 |

| | | | | | |
|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | \$54,964,000 | \$54,964,000 | \$54,964,000 |
| \$10,931,000 | \$10,931,000 | \$10,931,000 | \$9,234,000 | \$9,234,000 | \$9,234,000 |
| \$330,000 | \$330,000 | \$330,000 | \$330,000 | \$330,000 | \$330,000 |
| \$14,800,000 | \$14,800,000 | \$14,800,000 | \$14,800,000 | \$14,800,000 | \$14,800,000 |
| \$16,600,000 | \$16,600,000 | \$16,600,000 | \$16,600,000 | \$16,600,000 | \$16,600,000 |
| \$11,600,000 | \$11,600,000 | \$11,600,000 | \$11,600,000 | \$11,600,000 | \$11,600,000 |
| \$128,200,000 | \$128,200,000 | \$128,200,000 | \$128,200,000 | \$128,200,000 | \$128,200,000 |
| | \$9,350,000 | \$9,350,000 | \$9,350,000 | \$9,350,000 | \$9,350,000 |
| | | \$8,600,000 | \$8,600,000 | \$8,600,000 | \$8,600,000 |
| | | | | \$6,300,000 | \$6,300,000 |

| Mar-17 Estimated PTF Costs | Jun-17 Estimated PTF Costs | Oct-17 Estimated PTF Costs | Mar-18 Estimated PTF Costs | Jun-18 Estimated PTF Costs | Oct-18 Estimated PTF Costs |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | | | \$427,000 | \$427,000 | \$1,122,000 |

| | | | | | |
|--|--|--|--------------|--------------|--------------|
| | | | \$12,900,000 | \$12,900,000 | \$12,900,000 |
| | | | \$12,300,000 | \$12,300,000 | \$12,300,000 |
| | | | \$15,800,000 | \$15,800,000 | \$15,800,000 |
| | | | \$14,800,000 | \$14,800,000 | \$14,800,000 |
| | | | \$13,600,000 | \$13,600,000 | \$13,600,000 |
| | | | \$19,600,000 | \$19,600,000 | \$19,600,000 |
| | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

| | | | | | |
|--|--|--|--------------|--------------|--------------|
| | | | \$5,400,000 | \$5,400,000 | \$5,400,000 |
| | | | \$14,300,000 | \$14,300,000 | \$14,300,000 |
| | | | \$10,000,000 | \$10,000,000 | \$10,000,000 |
| | | | \$14,500,000 | \$14,500,000 | \$14,500,000 |
| | | | \$12,500,000 | \$12,500,000 | \$12,500,000 |

| Mar-17 Estimated PTF Costs | Jun-17 Estimated PTF Costs | Oct-17 Estimated PTF Costs | Mar-18 Estimated PTF Costs | Jun-18 Estimated PTF Costs | Oct-18 Estimated PTF Costs |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| \$4,700,000 | \$4,700,000 | \$4,700,000 | \$4,700,000 | \$4,700,000 | \$4,700,000 |
| \$34,500,000 | \$34,500,000 | \$34,500,000 | \$34,500,000 | \$34,500,000 | \$34,500,000 |
| | | | | | \$17,923,000 |
| | | | | | \$8,300,000 |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | | | |
|--|--|--|--------------|--------------|--------------|
| | | | \$21,400,000 | \$21,400,000 | \$21,400,000 |
| | | | \$7,250,000 | \$6,353,000 | \$6,353,000 |
| | | | \$6,900,000 | \$6,900,000 | \$6,900,000 |
| | | | \$16,500,000 | \$16,500,000 | \$16,500,000 |
| | | | \$6,000,000 | \$6,000,000 | \$6,000,000 |
| | | | \$13,500,000 | \$13,500,000 | \$13,500,000 |
| | | | \$16,000,000 | \$16,000,000 | \$16,000,000 |
| | | | \$14,300,000 | \$14,300,000 | \$14,300,000 |
| | | | \$10,600,000 | \$10,600,000 | \$10,600,000 |

| Mar-17 Estimated PTF Costs | Jun-17 Estimated PTF Costs | Oct-17 Estimated PTF Costs | Mar-18 Estimated PTF Costs | Jun-18 Estimated PTF Costs | Oct-18 Estimated PTF Costs |
|--|--|--|--|--|--|
| | | \$7,700,000 | \$4,779,000 | \$4,779,000 | \$5,300,000 |
| | \$5,200,000 | \$4,710,000 | \$4,710,000 | \$4,710,000 | \$4,710,000 |
| \$11,991,000 | \$11,991,000 | \$11,991,000 | \$11,991,000 | \$11,200,000 | \$11,200,000 |
| | \$10,300,000 | \$7,835,000 | \$7,835,000 | \$7,835,000 | \$7,835,000 |
| Cost Part of Asset Condition #5 (\$12.0) | Cost Part of Asset Condition #5 (\$12.0) | Cost Part of Asset Condition #5 (\$12.0) | Cost Part of Asset Condition #5 (\$12.0) | Cost Part of Asset Condition #5 (\$12.0) | Cost Part of Asset Condition #5 (\$12.0) |

| | | | | | |
|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | | \$16,600,000 | \$15,884,000 | \$15,884,000 | \$15,884,000 |
| | | \$7,551,000 | \$7,551,000 | \$7,551,000 | \$7,551,000 |
| | \$6,467,000 | \$6,467,000 | \$6,467,000 | \$6,467,000 | \$6,467,000 |
| | Cost part of Asset Condition #38 | Cost part of Asset Condition #38 | Cost part of Asset Condition #38 | Cost part of Asset Condition #38 | Cost part of Asset Condition #38 |
| \$15,500,000 | \$12,500,000 | \$11,093,000 | \$11,093,000 | \$11,093,000 | \$11,093,000 |
| \$5,919,000 | \$5,919,000 | \$5,919,000 | \$5,919,000 | \$5,919,000 | \$5,919,000 |
| Cost part of Asset Condition #1 | Cost part of Asset Condition #1 | Cost part of Asset Condition #1 | Cost part of Asset Condition #1 | Cost part of Asset Condition #1 | Cost part of Asset Condition #1 |
| \$6,437,000 | \$6,437,000 | \$6,437,000 | \$6,437,000 | \$6,437,000 | \$6,437,000 |

| | | | | | |
|--|-------------|--------------|--------------|-------------|-------------|
| | | \$10,148,000 | \$10,148,000 | \$7,017,000 | \$7,017,000 |
| | \$6,000,000 | \$4,600,000 | \$4,600,000 | \$4,600,000 | \$4,600,000 |

| Mar-17 Estimated PTF Costs | Jun-17 Estimated PTF Costs | Oct-17 Estimated PTF Costs | Mar-18 Estimated PTF Costs | Jun-18 Estimated PTF Costs | Oct-18 Estimated PTF Costs |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | | | \$7,966,000 | \$7,966,000 | \$7,966,000 |
| | \$13,700,000 | \$13,421,000 | \$13,421,000 | \$13,421,000 | \$13,421,000 |
| | | \$21,060,000 | \$21,060,000 | \$21,060,000 | \$21,060,000 |
| \$14,800,000 | \$11,500,000 | \$11,500,000 | \$14,800,000 | \$14,800,000 | \$14,800,000 |
| \$22,208,000 | \$22,208,000 | \$22,208,000 | \$22,208,000 | \$22,208,000 | \$22,208,000 |
| \$8,928,000 | \$6,500,000 | \$6,500,000 | \$6,500,000 | \$6,500,000 | \$6,500,000 |
| \$6,950,000 | \$6,950,000 | \$6,950,000 | \$6,950,000 | \$7,630,000 | \$7,630,000 |
| \$11,014,000 | \$11,014,000 | \$11,014,000 | \$11,014,000 | \$11,014,000 | \$11,014,000 |
| \$13,804,000 | \$13,804,000 | \$13,804,000 | \$13,804,000 | \$13,804,000 | \$13,804,000 |
| \$20,270,000 | \$20,270,000 | \$20,270,000 | \$20,270,000 | \$20,270,000 | \$20,270,000 |
| \$14,150,000 | \$14,150,000 | \$14,150,000 | \$14,150,000 | \$14,150,000 | \$14,150,000 |
| \$13,517,000 | \$13,517,000 | \$13,517,000 | \$13,517,000 | \$13,517,000 | \$13,517,000 |
| \$8,125,000 | \$8,125,000 | \$8,125,000 | \$8,125,000 | \$8,125,000 | \$8,125,000 |