

Assumptions Regarding Demand Resource Availability

For use in the 2015 ICR Calculations



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Objective of This Presentation

- Provide an historical record, all in one place, of Demand Resources (DR) performance values used to create a DR availability metric for the Installed Capacity Requirement (ICR) calculations
- Shows summer and winter performance for active DR for 2010-2014 (past five years of the Forward Capacity Market (FCM)) for
 - Real-Time Demand Response (RTDR)
 - Real-Time Emergency Generators (RTEG)
- Show the average of the five years of DR availability proposed for use in the 2015 ICR calculations
- Passive Demand Resources are modeled as 100% available in ICR
 - On-Peak
 - Seasonal Peak



SUMMER 2010 - 2014 DEMAND RESOURCE PERFORMANCE

Demand Resource Availability Recap – Summer 2014

- For Summer 2014 DR Performance details see Mar 26, 2015 PSPC discussion at:
 - [http://www.iso-ne.com/static-assets/documents/2015/03/Final Summer 2014 and initial winter 2014-15 DR audit results for 3-26-15 PSPC meeting.pdf](http://www.iso-ne.com/static-assets/documents/2015/03/Final_Summer_2014_and_initial_winter_2014-15_DR_audit_results_for_3-26-15_PSPC_meeting.pdf)
 - Based on audit data; No activations of RTDR or RTEG
 - RTDR performance = 104% (93% when capped at the Load Zone CSO value)
 - RTEG performance = 104% (96% when capped at the Load Zone CSO value)

Demand Resource Availability Recap – Summer 2013

- For Summer 2013 DR Performance details see May 22, 2014 PSPC discussion at:
 - http://www.iso-ne.com/committees/comm_wkgrps/relblty_comm/pwrsuppln_comm/mtrls/2014/may222014/pspc_52214_dr_performance_revised.pdf
 - RTDR performance = 124% (97% when capped at the Load Zone CSO value) based on audit results
 - July 19, 2013 OP4 event where all RTDR outside of Maine were called. Performance of 193 CSO MW = 95% (90% when capped at the Load Zone CSO)
 - Using OP4 event data for all zones outside of ME and audit data for ME = 94%
 - RTEG performance = 110% (100% when capped at the Load Zone CSO value) based on audit results

** Presentation does not show performance capped at Load Zone values. Those were determined by capping any Load Zone with performance > 100% at 100%*

Demand Resource Availability Recap – Summer 2012

- For Summer 2012 DR Performance details see March 14, 2013 PSPC discussion at:
 - http://www.iso-ne.com/committees/comm_wkgrps/reblty_comm/pwrsuppln_comm/mtrls/2013/mar142013/pspc_march142013_dr_performance_summer_2012.pdf
 - RTDR performance = 93% (91% when capped at the Load Zone CSO value) based on audit results (no events in summer 2012)
 - RTEG performance = 99% (95% when capped at the Load Zone CSO value) based on audit results

Demand Resource Availability Recap – Summer 2011

- For Summer 2011 DR Performance details see April 26, 2012 PSPC discussion at:
- http://www.iso-ne.com/committees/comm_wkgrps/relblty_comm/pwrsuppln_comm/mtrls/2012/apr262012/pspc_4_26_2012_dr_performance.pdf
 - RTDR performance = 96% (89% when capped at the Load Zone CSO value) from audit values. July 22, 2011 dispatch event performance = 100%
 - RTEG performance = 97% (95% when capped at the Load Zone CSO value) based on audit results

Demand Resource Availability Recap – Summer 2010

- For Summer 2010 DR Performance details see December 6, 2010 PSPC discussion at:
- http://www.iso-ne.com/committees/comm_wkgrps/relblty_comm/pwrsuppln_comm/mtrls/2010/dec62010/2010_12_06_pspc_dr_performance_summer_2010.pdf
 - Real-Time Demand Response (RTDR) performance from June 4, 2010 OP4 event = 100% (85% when capped at the Load Zone CSO value)
 - Real-Time Emergency Generator (RTEG) performance from audits = 65%



WINTER 2010/11 - 2014/15 DEMAND RESOURCE PERFORMANCE

Demand Resource Availability Recap – Winter 2014/15

- For Winter 2014/15 DR Performance details see May 28, 2015 PSPC discussion at:
 - http://www.iso-ne.com/static-assets/documents/2015/05/winter_2014-2015_dr_final_performance.pdf
 - Based on audit data; No activations of RTDR or RTEG
 - RTDR performance = 112% (94% when capped at the Load Zone CSO value)
 - RTEG performance = 93% (88% when capped at the Load Zone CSO value)



Demand Resource Availability Recap – Winter 2013/14

- For Winter 2013/14 DR Performance details see May 22, 2014 PSPC discussion at:
 - http://www.iso-ne.com/committees/comm_wkgrps/relbly_comm/pwrsuppln_comm/mtrls/2014/may222014/pspc_52214_dr_performance_revised.pdf
 - RTDR performance = 89% (89% when capped at the Load Zone CSO value) based on Audits
 - RTDR event on Dec 14, 2013 = 80% (76% when capped at Load Zone CSO Values) – Saturday evening, results may not be indicative of actual asset performance during weekday peak conditions
 - RTEG performance = 122% (95% when capped at the Load Zone CSO value) based on audits

** Presentation does not show performance capped at Load Zone values. Those were determined by capping any Load Zone with performance > 100% at 100%*

Demand Resource Availability Recap – Winter 2012/13

- For Winter 2012/13 DR Performance details see June 3, 2013 PSPC discussion at:
- http://www.iso-ne.com/committees/comm_wkgrps/relblty_comm/pwrsuppln_comm/mtrls/2013/jun32013/dr_winter_performance_update.pdf
 - RTDR performance = 100% (84% when capped at the Load Zone CSO value) based on January 28, 2013 event
 - RTEG performance = 99% (97% when capped at the Load Zone CSO value) based on audits

Demand Resource Availability Recap – Winter 2011/12

- For Winter 2011/12 DR Performance details see April 26, 2012 PSPC discussion at:
- http://www.iso-ne.com/committees/comm_wkgrps/relblty_comm/pwrsuppln_comm/mtrls/2012/apr262012/pspc_4_26_2012_dr_performance.pdf
 - RTDR performance from audits = 92% (90% when capped at the Load Zone CSO value)
 - RTEG performance from audits = 76% (75% when capped at the Load Zone CSO value)

Demand Resource Availability Recap – Winter 2010/11

- For Winter 2010/11 DR Performance details see May 19, 2011 PSPC discussion at:
- http://www.iso-ne.com/committees/comm_wkgrps/relblty_comm/pwrsuppln_comm/mtrls/2011/may192011/pspc_dr_performance_update.pdf
 - RTDR performance from audits = 97% (85% when capped at the Load Zone CSO value)
 - RTEG performance from audits = 84% (82% when capped at the Load Zone CSO value)

DEMAND RESOURCE AVAILABILITY ASSUMPTION FOR ICR CALCULATIONS

Passive Demand Resource (DR) Availability

- We will continue to model On-Peak and Seasonal Peak DR, which are the passive resources, as 100% available in the ICR calculations



Proposals of Active DR Availability Metrics

- Last year's ICR calculations used a DR availability metric based on summer and winter 2010 - 2013 DR performance
 - Weighted by the value of the MW achieved (capped at the Net CSO) if performance over 100% occurred
- ISO-NE proposes to calculate a DR availability metric for use in this year's ICR calculations based on summer & winter 2010 - 2014 DR performance
 - Same methodology as used for last year's ICR calculations
 - Adequate data available for winter performance now
 - Generator EFORd is an annual value
- We also propose a 5-year rolling average next year now that 5 years of data is available
 - Used for Generator EFORd and maintenance weeks

RTDR Summer Historical Performance (MW and %)

Real-Time Demand Response												
Load Zone	Summer 2010		Summer 2011		Summer 2012		Summer 2013		Summer 2014		Average Summer (Weighted by MW Achieved)	
	MW	%	MW	%	MW	%	MW	%	MW	%	MW	%
Connecticut	153	67	99	79	115	100	86	99	80	87	533	85
Maine	166	100	182	100	206	100	124	100	130	100	808	100
Northeast Massachusetts	51	72	41	90	39	76	21	84	17	81	168	80
New Hampshire	29	100	29	86	22	100	4	100	7	100	92	96
Rhode Island	28	100	35	82	30	77	9	47	13	80	115	82
Southeast Massachusetts	39	85	28	68	21	64	9	90	9	100	106	78
Vermont	24	100	31	100	37	100	23	100	27	100	141	100
West Central Massachusetts	80	100	77	93	66	76	21	84	24	86	267	90
New England	569	85	522	89	536	91	297	94	307	93	2,230	90

Average summer performance is determined by weighting performance for each year by the MW of CSO achieved in each Load Zone. Performance in a zone limited to 100% if over-performance occurred.

RTDR Winter Historical Performance (MW and %)

Load Zone	Real-Time Demand Response											
	Winter 2010		Winter 2011		Winter 2012		Winter 2013		Winter 2014		Average Winter (Weighted by MW Achieved)	
	MW	%	MW	%	MW	%	MW	%	MW	%	MW	%
Connecticut	83	66	53	100	52	69	40	79	66	91	294	80
Maine	144	100	161	93	142	100	127	98	96	100	669	98
Northeast Massachusetts	26	75	19	80	18	100	4	100	25	100	92	89
New Hampshire	26	100	26	62	14	65	3	91	4	64	72	77
Rhode Island	26	96	28	100	14	76	10	49	10	65	87	85
Southeast Massachusetts	15	52	15	81	10	74	26	88	6	82	71	77
Vermont	22	100	34	94	33	92	7	65	25	100	121	94
West Central Massachusetts	60	97	27	100	32	65	19	83	25	97	164	90
New England	400	85	363	90	314	84	247	89	257	94	1,581	88

Average winter performance is determined by weighting the performance for each year by the MW value of the CSO achieved in each Load Zone. Performance in a zone limited to 100% if over-performance occurred.

RTEG Summer Historical Performance (MW and %)

Real-Time Emergency Generation												
Load Zone	Summer 2010		Summer 2011		Summer 2012		Summer 2013		Summer 2014		Average Summer (Weighted by MW Achieved)	
	MW	%	MW	%	MW	%	MW	%	MW	%	MW	%
Connecticut	172	67	175	92	166	100	74	100	74	100	660	89
Maine	15	88	14	100	16	92	7	100	3	100	55	95
Northeast Massachusetts	47	60	53	100	43	84	20	100	19	100	181	86
New Hampshire	22	100	26	100	27	100	11	100	13	96	98	100
Rhode Island	23	56	22	95	25	100	9	100	12	87	92	86
Southeast Massachusetts	23	59	24	100	20	75	10	100	8	100	85	83
Vermont	9	77	8	83	7	72	2	100	3	75	29	79
West Central Massachusetts	29	49	44	95	42	100	20	100	18	88	153	88
New England	339	65	366	95	346	95	153	100	150	96	1,353	88

Average summer performance is determined by weighting performance for each year by the MW of CSO achieved in each Load Zone. Performance in a zone limited to 100% if over-performance occurred.

RTEG Winter Historical Performance (MW and %)

Real-Time Emergency Generation												
Load Zone	Winter 2010		Winter 2011		Winter 2012		Winter 2013		Winter 2014		Average Winter (Weighted by MW Achieved)	
	MW	%	MW	%	MW	%	MW	%	MW	%	MW	%
Connecticut	83	75	112	63	115	100	56	100	74	100	509	84
Maine	144	100	10	82	11	100	3	50	4	64	40	89
Northeast Massachusetts	26	88	39	100	33	96	19	100	2	52	132	95
New Hampshire	26	100	22	92	22	98	11	100	9	67	83	94
Rhode Island	26	99	15	100	18	90	6	100	11	100	72	97
Southeast Massachusetts	15	100	4	37	18	93	2	100	8	55	40	82
Vermont	22	81	9	95	6	100	6	61	3	91	40	85
West Central Massachusetts	60	88	21	96	30	88	18	100	18	91	118	92
New England	400	82	232	75	252	97	120	95	129	88	1,034	86

Average winter performance is determined by weighting the performance for each year by the MW value of the CSO achieved in each Load Zone. Performance in a zone limited to 100% if over-performance occurred.

RTDR Historical Performance (%)

Real-Time Demand Response													
Load Zone	Summer 2010	Summer 2011	Summer 2012	Summer 2013	Summer 2014	Average Summer (Weighted by MW Achieved)	Winter 2010	Winter 2011	Winter 2012	Winter 2013	Winter 2014	Average Winter (Weighted by MW Achieved)	Total Average Performance (Weighted by MW Achieved)
Connecticut	67	79	100	99	87	85	66	100	69	79	91	80	83
Maine	100	100	100	100	100	100	100	93	100	98	100	98	99
Northeast Massachusetts	72	90	76	84	81	80	75	80	100	100	100	89	83
New Hampshire	100	86	100	100	100	96	100	62	65	91	64	77	88
Rhode Island	100	82	77	47	80	82	96	100	76	49	65	85	83
Southeast Massachusetts	85	68	64	90	100	78	52	81	74	88	82	77	78
Vermont	100	100	100	100	100	100	100	94	92	65	100	94	97
West Central Massachusetts	100	93	76	84	86	90	97	100	65	83	97	90	90
New England	85	89	91	94	93	90	85	90	84	89	94	88	89

The final column is the 5-year average summer and winter RTDR performance

RTEG Historical Performance (%)

Real-Time Emergency Generation													
Load Zone	Summer 2010	Summer 2011	Summer 2012	Summer 2013	Summer 2014	Average Summer (Weighted by MW Achieved)	Winter 2010	Winter 2011	Winter 2012	Winter 2013	Winter 2014	Average Winter (Weighted by MW Achieved)	Average Performance (Weighted by MW Achieved)
Connecticut	67	92	100	100	100	89	75	63	100	100	100	84	87
Maine	88	100	92	100	100	95	100	82	100	50	64	89	92
Northeast Massachusetts	60	100	84	100	100	86	88	100	96	100	52	95	90
New Hampshire	100	100	100	100	96	100	100	92	98	100	67	94	97
Rhode Island	56	95	100	100	87	86	99	100	90	100	100	97	91
Southeast Massachusetts	59	100	75	100	100	83	100	37	93	100	55	82	83
Vermont	77	83	72	100	75	79	81	95	100	61	91	85	82
West Central Massachusetts	49	95	100	100	88	88	88	96	88	100	91	92	89
New England	65	95	95	100	96	88	82	75	97	95	88	86	87

The final column is the 5-year average summer and winter RTEG performance



Observations

1. For the first five FCM years, summer weighted New England total active DR performance has been increasing into the 90th percentile. Winter performance values generally range from the mid 80s to mid 90s without a consistent trend.
2. Increased passive DR CSOs modeled with 100% availability and decreased active DR CSOs are causing DR as a whole to be ICR reducing since they have better availability than the system average.

Proposed DR Availability Assumption for use in the FCA10 ICR Calculation

Load Zone	On-Peak		Seasonal Peak		RT Demand Response		RT Emergency Gen		Total	
	Summer (MW)	Performance	Summer (MW)	Performance	Summer (MW)	Performance	Summer (MW)	Performance	Summer	Performance
MAINE	167.022	100%	-	-	152.029	99%	7.482	92%	326.533	99%
NEW HAMPSHIRE	101.215	100%	-	-	16.038	88%	14.022	97%	131.275	98%
VERMONT	120.090	100%	-	-	31.900	97%	4.918	82%	156.908	99%
CONNECTICUT	78.815	100%	371.437	100%	77.374	83%	52.941	87%	580.567	97%
RHODE ISLAND	197.599	100%	-	-	60.362	83%	15.720	91%	273.681	96%
SOUTH EAST MASSACHUSETTS	292.685	100%	-	-	51.987	78%	12.722	83%	357.394	96%
WEST CENTRAL MASSACHUSETTS	293.340	100%	49.645	100%	59.584	90%	25.098	89%	427.667	98%
NORTH EAST MASSACHUSETTS & BOSTON	548.466	100%	-	-	73.529	83%	10.439	90%	632.434	98%
Total New England	1799.232	100%	421.082	100%	522.803	89%	143.342	89%	2,886.459	97%

- Applied to FCA10 Existing Qualified DR
- Average of 2010 – 2014 Historical summer & winter DR performance
- Modeled as a forced outage rate of 1-Performance in blocks by DR type and Load Zone
- Last year total New England was 3,054 MW at 96%

Questions



APPENDIX

Demand Resource Performance - Historical Tables

Summer 2010 RTDR Capacity by Load Zone

Load Zone	Total Net CSO	June Verified Capacity	Percent Net CSO
Connecticut	226.825	152.509	67%
West Central Massachusetts	79.821	84.526	106%
Northeast Massachusetts	70.738	50.895	72%
Southeast Massachusetts	45.233	38.558	85%
Rhode Island	27.761	28.078	101%
Vermont	23.713	31.594	133%
New Hampshire	29.106	34.39	118%
Maine	166.217	251.877	152%
New England	669.414	672.427	100%

Summer 2010 RTDR Performance Capped at Load Zone Net CSO

Load Zone	Total Net CSO	June Capacity Capped at CSO	Percent Net CSO
Connecticut	226.825	152.509	67%
West Central Massachusetts	79.821	79.821	100%
Northeast Massachusetts	70.738	50.895	72%
Southeast Massachusetts	45.233	38.558	85%
Rhode Island	27.761	27.761	100%
Vermont	23.713	23.713	100%
New Hampshire	29.106	29.106	100%
Maine	166.217	166.217	100%
New England	669.414	568.58	85%



Summer 2010 Real-Time Emergency Generation Capacity by Load Zone

Load Zone	Total Net CSO	June Verified Capacity	Percent Net CSO
Connecticut	255.282	171.703	67%
West Central Massachusetts	58.335	28.575	49%
Northeast Massachusetts	77.773	46.843	60%
Southeast Massachusetts	39.005	22.924	59%
Rhode Island	41.836	23.423	56%
Vermont	11.269	8.621	77%
New Hampshire	21.57	22.423	104%
Maine	17.315	15.3	88%
New England	522.385	339.812	65%



Summer 2010 RTEG Performance Capped at Load Zone Net CSO

Load Zone	Total Net CSO	June Capacity Capped at CSO	Percent Net CSO
Connecticut	255.282	171.703	67%
West Central Massachusetts	58.335	28.575	49%
Northeast Massachusetts	77.773	46.843	60%
Southeast Massachusetts	39.005	22.924	59%
Rhode Island	41.836	23.423	56%
Vermont	11.269	8.621	77%
New Hampshire	21.57	21.57	100%
Maine	17.315	15.3	88%
New England	522.385	338.959	65%

December 2010 RTDR Capacity by Load Zone

Load Zone	Net CSO	December Verified Capacity	Percent Net CSO
Connecticut	125.528	82.830	66%
Maine	143.789	158.253	110%
Northeast Massachusetts	34.141	25.619	75%
New Hampshire	25.568	42.057	164%
Rhode Island	26.516	25.546	96%
Vermont	22.003	42.856	195%
Southeast Massachusetts	28.372	14.631	52%
West Central Massachusetts	62.272	60.228	97%
New England	468.189	452.020	97%

December 2010 RTDR Performance Capped at Load Zone Net CSO

Load Zone	Net CSO	December Verified Capacity	Percent Net CSO
Connecticut	125.528	82.83	66%
Maine	143.789	143.789	100%
Northeast Massachusetts	34.141	25.619	75%
New Hampshire	25.568	25.568	100%
Rhode Island	26.516	25.546	96%
Vermont	22.003	22.003	100%
Southeast Massachusetts	28.372	14.631	52%
West Central Massachusetts	62.272	60.228	97%
New England	468.189	400.214	85%

December 2010 RTEG Capacity by Load Zone

Load Zone	Net CSO	December Verified Capacity	Percent Net CSO
Connecticut	202.817	151.587	75%
Maine	12.607	13.715	109%
Northeast Massachusetts	45.223	39.919	88%
New Hampshire	19.581	25.292	129%
Rhode Island	23.235	23.015	99%
Vermont	8.795	9.602	109%
Southeast Massachusetts	18.631	15.038	81%
West Central Massachusetts	35.081	30.810	88%
New England	365.97	308.978	84%

December 2010 RTEG Performance Capped at Load Zone Net CSO

Load Zone	Net CSO	December Verified Capacity	Percent Net CSO
Connecticut	202.817	151.587	75%
Maine	12.607	12.607	100%
Northeast Massachusetts	45.223	39.919	88%
New Hampshire	19.581	19.581	100%
Rhode Island	23.235	23.015	99%
Vermont	8.795	8.795	100%
Southeast Massachusetts	18.631	15.038	81%
West Central Massachusetts	35.081	30.81	88%
New England	365.97	301.352	82%

June 2011 RTDR Audit Results

Load Zone	Dispatched MW	Performance (MW)	Percentage
ME	182.355	218.83	120%
NH	33.928	29.242	86%
VT	30.581	31.345	103%
CT	124.827	99.086	79%
RI	42.651	34.781	82%
SEMA	41.557	28.256	68%
WCMA	82.255	76.8	93%
NEMA	45.304	40.864	90%
TOTAL	583.458	559.204	96%

June 2011 RTDR Performance Capped at Load Zone Net CSO

Load Zone	Dispatched MW	Performance (MW)	Percentage
ME	182.355	182.355	100%
NH	33.928	29.242	86%
VT	30.581	30.581	100%
CT	124.827	99.086	79%
RI	42.651	34.781	82%
SEMA	41.557	28.256	68%
WCMA	82.255	76.8	93%
NEMA	45.304	40.864	90%
TOTAL	583.458	521.965	89%

June 2011 RTEG Audit Results

Load Zone	Dispatched MW	Performance (MW)	Percentage
ME	14.016	16.183	116%
NH	25.872	28.066	109%
VT	9.606	7.993	83%
CT	190.796	175.431	92%
RI	23.631	22.383	95%
SEMA	23.854	25.252	106%
WCMA	46.123	44.016	95%
NEMA	52.827	53.946	102%
TOTAL	386.725	373.27	97%

June 2011 RTEG Performance Capped at Load Zone Net CSO

Load Zone	Dispatched MW	Performance (MW)	Percentage
ME	14.016	14.016	100%
NH	25.872	25.872	100%
VT	9.606	7.993	83%
CT	190.796	175.431	92%
RI	23.631	22.383	95%
SEMA	23.854	23.854	100%
WCMA	46.123	44.016	95%
NEMA	52.827	52.827	100%
TOTAL	386.725	366.392	95%

December 2011 RTDR Audit Results

Load Zone	Dispatched MW	Performance (MW)	Percentage
ME	173.4	161.1	92.9%
NH	42.0	26.0	62.0%
VT	35.8	33.8	94.2%
CT	52.9	57.3	108.2%
RI	28.2	28.9	102.8%
SEMA	18.3	14.8	80.6%
WCMA	27.5	27.4	99.8%
NEMA	23.5	18.7	79.5%
TOTAL	401.7	368.0	91.6%

December 2011 RTDR Audit Results Capped at Load Zone Net CSO

Load Zone	Dispatched MW	Performance (MW)	Percentage
ME	173.4	161.1	92.9%
NH	42.0	26.0	62.0%
VT	35.8	33.8	94.2%
CT	52.9	52.9	100.0%
RI	28.2	28.2	100.0%
SEMA	18.3	14.8	80.6%
WCMA	27.5	27.4	99.8%
NEMA	23.5	18.7	79.5%
TOTAL	401.7	362.9	90.3%

December 2011 RTEG Audit Results

Load Zone	Dispatched MW	Performance (MW)	Percentage
ME	12.5	10.2	81.6%
NH	24.0	22.0	91.5%
VT	9.4	3.5	37.4%
CT	176.8	112.0	63.4%
RI	14.6	16.6	113.5%
SEMA	9.8	9.3	94.8%
WCMA	22.3	21.3	95.7%
NEMA	38.7	39.4	101.8%
TOTAL	308.1	234.4	76.1%

December 2011 RTEG Audit Results Capped at Load Zone Net CSO

Load Zone	Dispatched MW	Performance (MW)	Percentage
ME	12.5	10.2	81.6%
NH	24.0	22.0	91.5%
VT	9.4	3.5	37.4%
CT	176.8	112.0	63.4%
RI	14.6	14.6	100.0%
SEMA	9.8	9.3	94.8%
WCMA	22.3	21.3	95.7%
NEMA	38.7	38.7	100.0%
TOTAL	308.1	231.7	75.2%

RTDR Audit Results

Summer 2012

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent Net CSO
CT	115.3	117.6	102.0%
ME	205.7	214.7	104.4%
NEMA	50.6	38.5	76.2%
NH	22.3	23.2	104.2%
RI	39.4	30.2	76.8%
SEMA	32.5	20.9	64.4%
VT	36.7	37.8	102.9%
WCMA	87.1	66.0	75.7%
TOTAL	589.5	548.9	93.1%

Summer 2012 RTDR Audit Results Capped at Load Zone Net CSO

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent Net CSO
CT	115	115.3	100.0%
ME	206	205.7	100.0%
NEMA	50.6	38.5	76.2%
NH	22.3	22.28	100.0%
RI	39.4	30.23	76.8%
SEMA	32.5	20.93	64.4%
VT	36.7	36.72	100.0%
WCMA	87.1	65.95	75.7%
TOTAL	589.5	535.6	90.9%

RTEG Audit Results

Summer 2012

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent Net CSO
CT	165.6	171.5	103.5%
ME	17.0	15.7	92.4%
NEMA	50.7	42.6	84.1%
NH	26.9	33.8	125.7%
RI	25.1	27.2	108.3%
SEMA	26.8	20.1	74.9%
VT	10.2	7.3	71.5%
WCMA	42.3	42.5	100.6%
TOTAL	364.5	360.7	98.9%

Summer 2012 RTEG Audit Results Capped at Load Zone Net CSO

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent Net CSO
CT	165.6	165.6	100.0%
ME	17.0	15.7	92.4%
NEMA	50.7	42.6	84.1%
NH	26.9	26.9	100.0%
RI	25.1	25.1	100.0%
SEMA	26.8	20.1	74.9%
VT	10.2	7.3	71.5%
WCMA	42.3	42.3	100.0%
TOTAL	364.5	345.6	94.8%

2012 RTDR Performance during 1/28/13 dispatch

		Performance	
Load Zone	Net CSO (MW)	MW	%
CT	75	52	69%
ME	142	198	140%
NEMA	18	19	109%
NH	21	14	65%
RI	18	14	76%
SEMA	13	10	74%
VT	36	33	92%
WCMA	50	32	65%
Total	373	372	100%

2012 RTDR Performance during 1/28/13 dispatch capped at Load Zone net CSO

		Performance	
Load Zone	Net CSO (MW)	MW	%
CT	75	52	69%
ME	142	142	100%
NEMA	18	18	100%
NH	21	14	65%
RI	18	14	76%
SEMA	13	10	74%
VT	36	33	92%
WCMA	50	32	65%
Total	373	314	84%

RTDR Audit Results

Winter 2012 - 2013

Load Zone	Dispatched MW (net CSO)	Performance (MW)	Percentage
CT	75	86	116%
ME	141	207	146%
NEMA	19	28	146%
NH	22	17	75%
RI	18	22	122%
SEMA	13	15	112%
VT	36	36	99%
WCMA	51	35	68%
Total	377	446	118%

Winter 2012 - 2013 RTDR Audit Results Capped at Load Zone Net CSO

Load Zone	Dispatched MW (net CSO)	Performance Capped at Load Zone Net CSO (MW)	Percentage
CT	75	75	100%
ME	141	141	100%
NEMA	19	19	100%
NH	22	17	75%
RI	18	18	100%
SEMA	13	13	100%
VT	36	36	99%
WCMA	51	35	68%
Total	377	354	94%

RTEG Audit Results

Winter 2012 - 2013

Load Zone	Dispatched MW (net CSO)	Performance (MW)	Percentage
CT	115	116	101%
ME	11	14	126%
NEMA	34	33	96%
NH	22	22	98%
RI	20	18	90%
SEMA	19	18	93%
VT	6	7	120%
WCMA	34	30	88%
Total	261	258	99%

RTEG Audit Results Capped at Load Zone NET CSO – Winter 2012 - 2013

Load Zone	Dispatched MW	Performance (MW)	Percentage
CT	115	115	100%
ME	11	11	100%
NEMA	34	33	96%
NH	22	22	98%
RI	20	18	90%
SEMA	19	18	93%
VT	6	6	100%
WCMA	34	30	88%
Total	261	252	97%

RTDR Performance - Summer 2013 Audits

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	87	113	130%
ME	124	165	133%
NEMA	25	27	107%
NH	4	7	203%
RI	19	10	52%
SEMA	10	14	142%
VT	23	30	131%
WCMA	25	27	108%
Total	318	394	124%

RTDR Performance - Summer 2013 Audit Performance Capped at Load Zone Net CSO

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	87	87	100%
ME	124	124	100%
NEMA	25	25	100%
NH	4	4	100%
RI	19	10	52%
SEMA	10	10	100%
VT	23	23	100%
WCMA	25	25	100%
Total	318	308	97%

RTEG Performance - Summer 2013 Audits

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	74	74	100%
ME	7	8	114%
NEMA	20	25	125%
NH	11	12	109%
RI	9	14	156%
SEMA	10	11	110%
VT	2	4	200%
WCMA	20	21	105%
Total	153	169	110%

RTEG Performance - Summer 2013 Audits Capped at Load Zone CSOs

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	74	74	100%
ME	7	7	100%
NEMA	20	20	100%
NH	11	11	100%
RI	9	9	100%
SEMA	10	10	100%
VT	2	2	100%
WCMA	20	20	100%
Total	153	153	100%

RTDR Performance on July 19, 2013 Including all Intervals of Dispatch

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	87	86	98.9%
NEMA	25	21	84.0%
NH	4	8	200.0%
RI	19	9	47.4%
SEMA	10	9	95.0%
VT	23	29	126.1%
WCMA	25	21	84.0%
Total	193	183	94.8%

RTDR Performance on July 19, 2013 Capped at the Load Zone Net CSO

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	87	86	98.9%
ME	-	-	-
NEMA	25	21	84.0%
NH	4	4	100.0%
RI	19	9	47.4%
SEMA	10	9	95.0%
VT	23	23	100.0%
WCMA	25	21	84.0%
Total	193	173	90%

RTDR Performance - Winter 2013 Audits

Load Zone	Final Performance (MW)	Net CSO (MW)	Percent of Final Performance to Net CSO
CT	40.4	51.3	78.8%
ME	123.8	126.9	97.6%
NEMA	5.7	4.4	131.2%
NH	2.9	3.2	91.5%
RI	4.7	9.6	49.4%
SEMA	4.6	7.1	64.3%
VT	22.8	25.8	88.7%
WCMA	15.7	18.9	82.8%
Total	220.7	247.1	89.3%

RTDR Performance - Winter 2013 Audits Capped at Load Zone Net CSOs

Load Zone	Final Performance (MW)	Net CSO (MW)	Percent of Final Performance to Net CSO
CT	40.4	51.3	78.8%
ME	123.8	126.9	97.6%
NEMA	4.4	4.4	100.0%
NH	2.9	3.2	91.5%
RI	4.7	9.6	49.4%
SEMA	4.6	7.1	64.3%
VT	22.8	25.8	88.7%
WCMA	15.7	18.9	82.8%
Total	219.3	247.1	88.7%

RTDR Performance - Winter 2013 Audits Capped at Load Zone Net CSOs

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	40.4	51.3	78.8%
ME	123.8	126.9	97.6%
NEMA	5.7	4.4	131.2%
NH	2.9	3.2	91.5%
RI	4.7	9.6	49.4%
SEMA	4.6	7.1	64.3%
VT	22.8	25.8	88.7%
WCMA	15.7	18.9	82.8%
Total	220.7	247.1	89.3%

RTEG Performance - Winter 2013 Audits

Load Zone	Final Performance (MW)	Net CSO (MW)	Percent of Final Performance to Net CSO
CT	78.1	56.1	139.4%
ME	2.9	5.8	51.0%
NEMA	20.6	18.7	110.0%
NH	12.6	10.6	118.5%
RI	11.9	6.1	194.5%
SEMA	6.0	9.9	60.9%
VT	2.5	1.9	134.3%
WCMA	20.1	18.1	111.0%
Total	154.8	127.1	121.8%

RTEG Performance - Winter 2013 Audits Capped at Load Zone Net CSOs

Load Zone	Final Performance (MW)	Net CSO (MW)	Percent of Final Performance to Net CSO
CT	78.1	56.1	100%
ME	2.9	5.8	51.0%
NEMA	18.7	18.7	100%
NH	10.6	10.6	100%
RI	6.1	6.1	100%
SEMA	6.0	9.9	60.9%
VT	1.9	1.9	100%
WCMA	18.1	18.1	100%
Total	120.4	127.1	95%

RTDR Performance on December 14, 2013

Including all Intervals of Dispatch

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	52.1	15.8	30.4%
ME	126.9	135.4	106.7%
NEMA	3.5	1.7	49.2%
NH	3.2	1.5	48.7%
RI	10.2	6.1	60.2%
SEMA	7.0	0.3	4.6%
VT	25.9	23.1	89.4%
WCMA	19.0	13.5	71.2%
Total	247.8	197.7	79.8%

RTDR Performance on December 14, 2013 Capped at Load Zone Net CSOs

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	52.1	15.8	30.4%
ME	126.9	126.9	100.0%
NEMA	3.5	1.7	49.2%
NH	3.2	1.5	48.7%
RI	10.2	6.1	60.2%
SEMA	7.0	0.3	4.6%
VT	25.9	23.1	89.4%
WCMA	19.0	13.5	71.2%
Total	247.8	188.9	76.2%

RTDR Performance - Summer 2014 Audits

Load Zone	Net CSO (MW)	Audit Results (MW)	Audit vs. Net CSO
CT	92.0	80.2	87%
ME	129.8	160.0	123%
NEMA	20.3	16.5	81%
NH	7.2	7.3	102%
RI	16.7	13.3	80%
SEMA	8.9	12.2	137%
VT	27.1	30.2	112%
WCMA	27.7	23.8	86%
Total	329.6	343.6	104%

RTDR Summer 2014 Audits Capped at Load Zone Net CSO

Load Zone	Net CSO (MW)	Capped Audit Results (MW)	Capped Audit Results vs. Net CSO
CT	92.0	80.2	87%
ME	129.8	129.8	100%
NEMA	20.3	16.5	81%
NH	7.2	7.2	100%
RI	16.7	13.3	80%
SEMA	8.9	8.9	100%
VT	27.1	27.1	100%
WCMA	27.7	23.8	86%
Total	329.6	306.8	93.1%

RTEG Performance - Summer 2014 Audits

Load Zone	Net CSO (MW)	Audit Results (MW)	Audit vs. Net CSO
CT	73.6	84.8	115%
ME	3.4	3.7	109%
NEMA	19.0	19.3	102%
NH	13.2	12.7	96%
RI	13.8	12.0	87%
SEMA	8.3	8.6	103%
VT	3.6	2.7	74%
WCMA	20.2	17.8	88%
Total	155.1	161.5	104%

RTEG Summer 2014 Audits Capped at Load Zone Net CSO

Load Zone	Net CSO (MW)	Capped Audit Results (MW)	Capped Audit Results vs. Net CSO
CT	73.6	73.6	100%
ME	3.4	3.4	100%
NEMA	19.0	19.0	100%
NH	13.2	12.7	96%
RI	13.8	12.0	87%
SEMA	8.3	8.3	100%
VT	3.6	2.7	74%
WCMA	20.2	17.8	88%
Total	155.1	149.5	96.4%

RTDR Final Performance - Winter 2014-2015 Audits

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	73.0	66.3	90.8%
ME	95.5	127.0	133.0%
NEMA	24.8	38.1	153.6%
NH	5.8	3.7	64.4%
RI	15.0	9.8	65.7%
SEMA	7.4	6.1	83.0%
VT	25.3	29.3	115.7%
WCMA	26.0	25.2	96.9%
Total	272.7	305.5	112.0%

RTDR Final Performance - Winter 2014-2015 Audits Capped at Load Zone Net CSO

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	73.0	66.3	90.8%
ME	95.5	95.5	100.0%
NEMA	24.8	24.8	100.0%
NH	5.8	3.7	64.4%
RI	15.0	9.8	65.7%
SEMA	7.4	6.1	83.0%
VT	25.3	25.3	100.0%
WCMA	26.0	25.2	96.9%
Total	272.7	256.7	94.1%

RTEG Final Performance - Winter 2014-2015 Audits

Load Zone	Net CSO (MW)	Final Performance (MW)	Percent of Final Performance to Net CSO
CT	74.2	79.7	107.4%
ME	5.5	3.5	63.5%
NEMA	4.1	2.1	51.5%
NH	13	8.7	66.7%
RI	10.6	11.8	111.9%
SEMA	14.7	8.1	55.3%
VT	3.7	3.3	90.6%
WCMA	19.9	18.1	91.2%
Total	145.6	135.4	93.0%

RTEG Final Performance - Winter 2014-2015 Audits Capped at Load Zone net CSO

Load Zone	Net CSO (MW)	Initial Audit Results (MW)	Audit vs. Net CSO
CT	74.2	74.2	100.0%
ME	5.5	3.5	63.5%
NEMA	4.1	2.1	51.5%
NH	13	8.7	66.7%
RI	10.6	10.6	100.0%
SEMA	14.7	8.1	55.3%
VT	3.7	3.3	90.6%
WCMA	19.9	18.1	91.2%
Total	145.6	128.6	88.3%