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To: NEEP Forum Date: August 2, 2011

From: Jarred Metoyer, KEMA

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Subject: Report Revision August 2

The following memo highlights the changes to the 6 primary report tables that changed in the August 2 Report revision. An in issue was discovered in the application of weights to the sample which produced an error in some results. All changes were within the originally reported error bounds and by statistical definition are not significant with the exception of two values peak values were the revised estimate is also more precise. This memo provides limited discussion as the goal was to revise and publish the revision as soon as possible to avoid any issues of use of the study results. The changes are summarized in new tables (page 1 and 2) followed by a set of tables comparing report versions (page 3-5).

Annual Estimates of Effective Full Load Hours (Tables 0-2 (same as 3-1), Table 0-3 (same as 3-3), and Table 0-4 (same as 3-5). All changes are within the reported error bounds.

			June10 Reported			
Group		Revised August 2 Value	EFLH	EFLH Error Bound	Difference (Aug2-June 10)	Is Diff. Within Reported Error Bound?
Unit Size	Region	Hours	Hours	Hours	Hours	
Small	Mid Atlantic	1,014	1,273	290	(259)	Yes
Small	NE-East Mass	1,104	1,104	210	-	Yes
Small	NE-North	829	829	204	-	Yes
Small	NE-South Coast	932	932	179	-	Yes
Small	NY-Inland	659	659	215	-	Yes
Small	NY-Urban-Coast	1,204	1,204	128	-	Yes
Large	Mid Atlantic	1,823	1,888	359	(65)	Yes
Large	NE-East Mass	1,223	1,220	226	3	Yes
Large	NE-North	679	605	113	74	Yes
Large	NE-South Coast	793	723	151	70	Yes
Large	NY-Inland	1,065	1,077	217	(13)	Yes
Large	NY-Urban-Coast	1,659	1,720	333	(61)	Yes
TOTAL	Mid Atlantic	1,495	1,639	244	(144)	Yes
TOTAL	NE-East Mass	1,173	1,172	158	1	Yes
TOTAL	NE-North	755	719	118	36	Yes
TOTAL	NE-South Coast	855	817	116	38	Yes
TOTAL	NY-Inland	952	961	168	(9)	Yes
TOTAL	NY-Urban-Coast	1,492	1,531	216	(39)	Yes

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All but two of the differences in peak coincidence factors were within the originally reported error bounds. The table below highlights those factors and shows the improvement in precision for those estimates.

		Aug2 Revised			June10 Reported						Highlight Diff. > Error Bound			
Group		On-Peak KWh (ISO-NE Hours)	On-Peak KWh (PJM Hours)	On-Peak KWh (FCM Hours)	On-Peak KWh (ISO-NE Hours)	On-Peak KWh (PJM Hours)	On-Peak KWh (FCM Hours)	On-Peak KWh (ISO-NE Hours)	On-Peak KWh (PJM Hours)	On-Peak KWh (FCM Hours)	Difference (ISO-NE On-Peak)	Difference (PJM On-Peak)	Difference (FCM Seasonal Peak)	Precision Improvement (New Value is More Precise
Unit Size	Region	Ratio	Ratio	Ratio	CF	CF	CF	EB	EB	EB	Diff.	Diff.	Diff.	%
Small	Mid Atlantic	0.3578	0.3596		0.4300	0.4300	-	0.0747	0.0753	-	(0.0723)	(0.0816)	N/A	-±9.92%
Small	NE-East Mass	0.4345	0.4305	0.4758	0.4345	0.4345	0.4758	0.0690	0.0693	0.0752	-	-		
Small	NE-North	0.3720	0.3623	0.4519	0.3720	0.3720	0.4519	0.0775	0.0755	0.0939	-	-		
Small	NE-South Coast	0.3498	0.3357	0.4311	0.3498	0.3498	0.4311	0.0588	0.0587	0.0753	-	-		
Small	NY-Inland	0.2426	0.2433		0.2426	0.2426	-	0.0708	0.0709	-	-	-	N/A	
Small	NY-Urban-Coast	0.4435	0.4507		0.4435	0.4435	-	0.0427	0.0427	-	-	-	N/A	
Large	Mid Atlantic	0.5787	0.5674		0.6345	0.6345	-	0.0945	0.0971	-	(0.0558)	(0.0590)	N/A	
Large	NE-East Mass	0.4591	0.4543	0.4940	0.4570	0.4570	0.4940	0.0670	0.0678	0.0732	0.0021	0.0013		
Large	NE-North	0.3113	0.3054	0.3953	0.2897	0.2897	0.3803	0.0560	0.0576	0.0830	0.0216	0.0180		
Large	NE-South Coast	0.3314	0.3328	0.4416	0.3136	0.3136	0.4416	0.0548	0.0549	0.0646	0.0178	0.0186		
Large	NY-Inland	0.4348	0.4375		0.4370	0.4370	-	0.0846	0.0849	-	(0.0022)	(0.0017)	N/A	
Large	NY-Urban-Coast	0.6162	0.6335		0.6313	0.6313	-	0.0941	0.0904	-	(0.0151)	(0.0175)	N/A	
TOTAL	Mid Atlantic	0.4892	0.4833	0	0.5517	0.5517	-	0.0639	0.0653	#DIV/0!	(0.0625)	(0.0681)	N/A	-±2.44%
TOTAL	NE-East Mass	0.4488	0.4443	0.4863	0.4476	0.4476	0.8388	0.0485	0.0489	0.0529	0.0012	0.0007		
TOTAL	NE-North	0.3421	0.3343	0.4241	0.3315	0.3315	0.7545	0.0481	0.0477	0.0628	0.0106	0.0089		
TOTAL	NE-South Coast	0.3397	0.3341	0.4369	0.3298	0.3298	0.7761	0.0401	0.0401	0.0491	0.0098	0.0103		
TOTAL	NY-Inland	0.3815	0.3836	0	0.3831	0.3831	-	0.0642	0.0644	#DIV/0!	(0.0016)	(0.0012)	N/A	
TOTAL	NY-Urban-Coast	0.5529	0.5665	0	0.5625	0.5625	-	0.0616	0.0594	#DIV/0!	(0.0095)	(0.0111)	N/A	

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Table comparison for annual estimates follow :

August 3- Table 0-1: Annual Load Factor and EFLH Estimate by Region Totals[1]

Total	Annual Load Factor (EFLH/8760)			EFLH = Effective Full Load Cooling Hours		
Region	Estimated Ratio	RP @ 80%CI	RP @ 90%CI	Annual Estimate	RP @ 80%CI	RP @ 90%CI
Mid-Atlantic	0.1707	±9.78%	±12.55%	1,495	±9.78%	±12.55%
NE-East Mass	0.1339	±10.12%	±12.99%	1,173	±10.12%	±12.99%
NE-North	0.0862	±13.14%	±16.87%	755	±13.14%	±16.87%
NE-South Coastal	0.0976	±11.44%	±14.69%	855	±11.44%	±14.69%
NY- Inland	0.1087	±13.58%	±17.43%	952	±13.58%	±17.43%
NY- Urban/Coastal	0.1704	±10.69%	±13.72%	1,492	±10.69%	±13.72%

June 10 - Table 0-2: Annual Load Factor and EFLH Estimate by Region Totals[2]

Total

Total	Annual Load Factor (EFLH/8760)			EFLH = Effective Full Load Cooling Hours		
Region	Estimated Ratio	RP @ 80%CI	RP @ 90%CI	Annual Estimate	RP @ 80%CI	RP @ 90%CI
Mid-Atlantic	0.187087	±11.59%	±14.87%	1,639	±11.59%	±14.87%
NE-East Mass	0.133754	±10.49%	±13.47%	1,172	±10.49%	±13.47%
NE-North	0.082068	±12.76%	±16.38%	719	±12.76%	±16.38%
NE-South Coastal	0.093258	±11.05%	±14.18%	817	±11.05%	±14.18%
NY- Inland	0.109728	±13.59%	±17.44%	961	±13.59%	±17.44%
NY- Urban/Coastal	0.174788	±11.01%	±14.13%	1,531	±11.01%	±14.13%

[1] Note that relative precision (RP) at the 80% two-tail interval is equivalent to that of the RP 90% one-tail.

[2] Note that relative precision (RP) at the 80% two-tail interval is equivalent to that of the RP 90% one-tail.

August 3- Table 0-3: Load Ratio Estimate by Region Small Units[1]

SMALL units (<11.25 TONS)							
	Small Units	Annual Load Factor (EFLH/8760)			EFLH		
	Region	Estimated Ratio	RP @ 80%CI	RP @ 90%CI	Annual Estimate	RP @ 80%CI	RP @ 90%CI
	Mid-Atlantic	0.1157	±6.79%	±8.72%	1,014	±6.79%	±8.72%
	NE-East Mass	0.1261	±14.78%	±18.97%	1,104	±14.78%	±18.97%
	NE-North	0.0946	±19.18%	±24.62%	829	±19.18%	±24.62%
	NE-South Coastal	0.1064	±14.98%	±19.22%	932	±14.98%	±19.22%
	NY- Inland	0.0752	±25.39%	±32.59%	659	±25.39%	±32.59%
	NY- Urban/Coastal	0.1375	±8.27%	±10.62%	1,204	±8.27%	±10.62%

June10- Table 0-4: Load Ratio Estimate by Region Small Units[1]

SMALL units (<11.25 TONS)							
	Small Units	Annual Load Factor (EFLH/8760)			EFLH		
	Region	Estimated Ratio	RP @ 80%CI	RP @ 90%CI	Annual Estimate	RP @ 80%CI	RP @ 90%CI
	Mid-Atlantic	0.1453	±17.77%	±22.81%	1,273	±17.77%	±22.81%
	NE-East Mass	0.1261	±14.78%	±18.97%	1,104	±14.78%	±18.97%
	NE-North	0.0946	±19.18%	±24.62%	829	±19.18%	±24.62%
	NE-South Coastal	0.1064	±14.98%	±19.22%	932	±14.98%	±19.22%
	NY- Inland	0.0752	±25.39%	±32.59%	659	±25.39%	±32.59%
	NY- Urban/Coastal	0.1375	±8.27%	±10.62%	1,204	±8.27%	±10.62%

August 3- Table 0-5: Load Ratio Estimate by Region Large Units[1]

LARGE units (≥ 11.25 TONS)							
	Large Units	Annual Load Factor (EFLH/8760)			EFLH		
	Region	Estimated Ratio	RP @ 80%CI	RP @ 90%CI	Annual Estimate	RP @ 80%CI	RP @ 90%CI
	Mid-Atlantic	0.2081	±13.24%	±16.99%	1,823	±13.24%	±16.99%
	NE-East Mass	0.1396	±13.67%	±17.54%	1,223	±13.67%	±17.54%
	NE-North	0.0775	±17.26%	±22.15%	679	±17.26%	±22.15%
	NE-South Coastal	0.0905	±17.21%	±22.09%	793	±17.21%	±22.09%
	NY- Inland	0.1215	±15.69%	±20.13%	1,065	±15.69%	±20.13%
	NY- Urban/Coastal	0.1894	±14.78%	±18.97%	1,659	±14.78%	±18.97%

June10- Table 0-6: Load Ratio Estimate by Region Large Units[1]

LARGE units (≥ 11.25 TONS)							
	Large Units	Annual Load Factor (EFLH/8760)			EFLH		
	Region	Estimated Ratio	RP @ 80%CI	RP @ 90%CI	Annual Estimate	RP @ 80%CI	RP @ 90%CI
	Mid-Atlantic	0.2155	±14.81%	±19.00%	1,888	±14.81%	±19.00%
	NE-East Mass	0.1393	±14.41%	±18.49%	1,220	±14.41%	±18.49%
	NE-North	0.0691	±14.60%	±18.73%	605	±14.60%	±18.73%
	NE-South Coastal	0.0826	±16.31%	±20.93%	723	±16.31%	±20.93%
	NY- Inland	0.1230	±15.69%	±20.13%	1,077	±15.69%	±20.13%
	NY- Urban/Coastal	0.1964	±15.10%	±19.38%	1,720	±15.10%	±19.38%

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