

Gas Marginal COS @ 12/31/10 Workpapers

Associated with Schedule PMN-2G-2

Northern Utilities – New Hampshire

Docket DG 11-069

Table of Contents

Cost of Capital	Page 1
Handy-Whitman Index	Pages 2-3
Accounting Data	Pages 4-12
Depreciation	Page 13
Mains	Page 14
Growth Related	Page 15
Design Day Forecast Data	Page 16
System Load Data	Pages 17-18
Design Day Estimates	Page 19
Class Design Day	Page 20
Class Data	Page 21
Reinforcements	Page 22
Uncollectibles	Page 23
EIA Forecasted Inflation	Page 24

Northern Utilities- New Hampshire
 Marginal Cost Study 2011
 Work Paper - Cost of Capital

INCREMENTAL COST OF CAPITAL		K	Wt
Debt		5.73%	59.75%
Preferred		0.00%	0.00%
Common		10.50%	40.25%
Other		0.00%	0.00%
Tax Rate		39.61%	
ITC RATE		0.00%	
REVENUE TAX RATE		0.00%	
Property Tax Rate-Peaking		1.28%	
Property Tax Rate-Mains		0.00%	
Property Tax Rate-Services		0.00%	
Property Tax Rate-Meters		0.00%	
Gross Receipts Tax Rate		0.00%	
Inflation Rate	{1}	2.30%	
Property Tax Escalation Rate	{2}	2.80%	
Commodity Escalation Rate		0.00%	

Notes

1. Forecasted 2012 Inflation Rate is 2.8% and adjusted for technical Progress, .5%, to arrive at 2.3%
2. Property Tax Escalation Rate is equal to the inflation rate.
3. Commodity Escalation Rate is annual growth rate from EIA Forecast
4. Forecasted Inflation rate provided by the EIA Feb 2011 Short-Term Energy Outlook

Northern Utilities- New Hampshire
 Marginal Cost Study 2011
 Work Paper - Handy-Whitman

Test Year to Rate Year Escalator	4.26%	31-Dec-10	31-Oct-12						
Handy Whitman Indices - Year	1989	1990	1991	1992	1993	1994	1995	1996	1997
Steel Mains - Jan 1	280	285	295	300	312	333	345	340	355
Steel Mains - Jul 1	283	290	301	309	312	335	349	351	360
Annual Average	282.8	290.0	299.3	307.5	317.3	337.0	345.8	349.3	359.5
Plastic Mains - Jan 1	277	283	294	296	307	313	319	325	333
Plastic Mains - Jul 1	280	289	299	302	310	315	322	330	337
Annual Average	280.0	288.8	297.0	301.8	310.0	315.5	322.0	329.5	337.0
L.P.G. Equip - Jan 1	242	246	252	260	270	276	284	289	297
L.P.G. Equip - Jul 1	244	250	258	266	274	279	288	293	300
Annual Average	244.0	249.5	257.0	265.5	273.5	279.5	287.3	293.0	300.0

Northern Utilities- New Hampshire
 Marginal Cost Study 2011
 Work Paper - Handy-Whitman

Test Year to Rate Year Escalator

Handy Whitman Indices - Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Steel Mains - Jan 1	363	370	392	400	408	414	463	595	624	607	630	713	687
Steel Mains - Jul 1	366	373	396	405	411	414	482	590	635	611	729	683	713
Annual Average	366.3	377.0	396.0	404.5	411.0	426.3	505.5	599.8	625.3	614.8	700.3	691.5	700.0
Plastic Mains - Jan 1	341	346	354	364	369	376	389	411	433	460	480	514	502
Plastic Mains - Jul 1	344	351	357	367	376	379	394	421	440	465	486	516	502
Annual Average	343.8	350.5	358.0	366.8	374.3	380.8	397.0	421.5	443.3	467.5	491.5	512.0	502.0
L.P.G. Equip - Jan 1	303	307	315	327	342	347	365	415	430	449	471	499	518
L.P.G. Equip - Jul 1	305	311	324	335	347	345	393	423	433	452	487	512	519
Annual Average	305.0	311.0	322.5	334.8	345.8	350.5	391.5	422.8	436.3	456.0	486.0	510.3	518.5

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Historical Plant Data

	1987	1988	1989	1990	1991	1992
DISTRIBUTION PLANT BALANCES						
375 Distribution Structures		1,907,261	1,946,802	1,970,765	1,977,191	2,011,929
376 Mains	9,396,338	10,797,337	12,353,883	15,264,009	19,514,509	22,527,044
378 Distribution M&R Station Equip.	295,732	345,623	421,515	544,570	587,436	672,030
380 Services	3,908,413	4,746,075	5,601,807	7,015,655	8,354,955	9,516,045
381 Meters	526,496	579,146	671,968	819,179	965,739	1,069,494
382 Meter Installations	1,408,166	1,548,984	1,797,248	2,190,979	2,582,968	2,860,471
383 Dist. House Regulators						
386 Dist Water Htrs & Conv. Burners	156,516	207,275	378,308	653,700	1,048,110	1,342,183
Total	15,691,661	20,131,701	23,171,532	28,458,858	35,030,909	39,999,196
GENERAL PLANT BALANCES						
391 Furniture & Equip.		174,762	169,170	199,331	203,210	205,408
393 Stores Equip.		29,892	38,096	52,721	53,282	64,002
394 Tools Shop & Garage Equip.	27,321	27,872	1	1	3,410	3,410
396 Power Equip	76,664	164,121	291,110	344,194	344,194	498,568
397 Communication Equip.	76,664	164,121	291,110	344,194	344,194	498,568
Total General Plant	180,649	560,768	789,487	940,441	948,290	1,269,956
Total Plant in Svc	15,872,310	20,692,470	23,961,019	29,399,299	35,979,199	41,269,152
MISC. PLANT						
151 M&S - Fuel Inventory						
154 Plant M&S						
164 Fuel Inventory						
165 Prepayments						

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Historical Plant Data

	1993	1994	1995	1996	1997	1998	1999	2000	2001
DISTRIBUTION PLANT BALANCES									
375 Distribution Structures	2,078,973	2,092,137	2,100,422	2,172,031	2,203,295	2,257,157	2,259,457	2,259,457	2,235,888
376 Mains	24,376,933	27,050,294	30,884,264	36,225,118	37,568,970	39,178,319	40,532,171	42,573,536	43,946,403
378 Distribution M&R Station Equip.	736,918	857,679	938,019	1,051,946	1,137,147	1,195,858	1,262,572	1,397,118	1,449,677
380 Services	10,414,950	12,259,370	13,093,569	14,215,570	15,343,058	16,395,084	17,316,520	18,225,158	19,031,262
381 Meters	1,173,492	1,320,561	1,441,377	1,555,937	1,713,693	1,867,950	2,036,063	2,156,363	2,193,616
382 Meter Installations	3,138,624	3,531,975	3,855,111	4,161,512	4,583,446	4,996,024	5,445,660	5,767,414	6,202,545
383 Dist. House Regulators							6,776	10,520	43,097
386 Dist Water Htrs & Conv. Burners	1,657,512	1,865,584	1,953,335	2,139,929	3,359,028	3,377,491	3,425,650	3,520,935	3,497,800
Total	43,577,401	48,977,600	54,266,097	61,522,043	65,908,637	69,267,883	72,284,868	75,910,501	78,600,288
GENERAL PLANT BALANCES									
391 Furniture & Equip.	283,911	371,174	528,408	658,925	761,751	850,228	860,465	729,663	620,409
393 Stores Equip.	69,182	89,982	85,614	85,614	85,614	81,950	81,950	37,262	36,700
394 Tools Shop & Garage Equip.	8,314	16,877	86,158	173,220	236,012	289,413	374,181	482,643	489,934
396 Power Equip	510,511	536,023	574,823	592,377	639,779	667,086	652,049	712,940	567,004
397 Communication Equip.	510,511	536,023	574,823	592,377	639,779	667,086	652,049	712,940	567,004
Total General Plant	1,382,429	1,550,079	1,849,827	2,102,512	2,362,936	2,555,764	2,620,695	2,675,448	2,281,051
Total Plant in Svc	44,959,830	50,527,679	56,115,924	63,624,556	68,271,573	71,823,646	74,905,563	78,585,950	80,881,339
MISC. PLANT									
151 M&S - Fuel Inventory				288,023	85,178	8,673,434	10,091,867	12,627,432	18,232,384
154 Plant M&S				501,725	592,798	670,629	674,451	774,134	497,805
164 Fuel Inventory				1,441,405	1,282,194	0	0	0	0
165 Prepayments				1,988,580	1,798,306	2,098,238	2,359,041	2,148,760	2,100,142

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Historical Plant Data

	2002	2003	2004	2005	2006	2007	2008	2009	2010
DISTRIBUTION PLANT BALANCES									
375 Distribution Structures	2,250,950	2,250,950	2,295,667	2,295,667	2,332,194	2,332,194	2,332,194	2,334,042	2,820,320
376 Mains	45,608,517	47,288,473	49,392,846	50,531,680	54,591,098	57,186,366	59,131,775	59,604,088	65,458,022
378 Distribution M&R Station Equip.	1,467,946	1,553,479	1,611,260	1,636,689	1,744,560	1,770,112	1,770,112	1,770,570	1,787,578
380 Services	20,121,536	20,957,811	21,950,166	22,501,256	23,747,433	24,504,110	25,310,140	25,924,573	31,874,279
381 Meters	2,245,296	2,299,393	2,330,449	2,389,031	2,432,023	2,643,177	2,723,484	2,723,484	3,506,040
382 Meter Installations	6,771,415	7,315,947	7,771,080	8,360,751	9,196,256	9,814,274	10,622,593	10,703,831	12,313,745
383 Dist. House Regulators	86,332	118,546	158,413	185,195	185,195	185,195	185,195	185,195	222,731
386 Dist Water Htrs & Conv. Burners	3,538,176	3,589,462	3,052,832	2,868,870	2,307,938	2,362,713	2,444,161	2,447,385	2,523,018
Total	82,090,168	85,374,061	88,562,714	90,769,138	96,536,697	100,798,141	104,519,655	105,693,170	120,505,734
GENERAL PLANT BALANCES									
391 Furniture & Equip.	640,214	653,662	544,356	563,993	563,993	491,372	491,372	493,969	602,092
393 Stores Equip.	36,700	36,700	31,520	31,520	31,520	31,520	31,520	31,520	31,520
394 Tools Shop & Garage Equip.	489,934	489,934	507,424	515,138	526,161	498,760	535,529	593,963	874,077
396 Power Equip	571,759	2,304,352	2,330,005	2,353,603	2,433,474	2,641,876	2,719,990	3,215,949	3,470,318
397 Communication Equip.	571,759	592,504	562,730	520,165	558,165	494,554	501,747	954,971	1,143,342
Total General Plant	2,310,365	4,077,153	3,976,035	3,984,419	4,113,313	4,158,083	4,280,158	5,290,372	6,121,350
Total Plant in Svc	84,400,533	89,451,213	92,538,749	94,753,557	100,650,010	104,956,224	108,799,813	110,983,542	126,627,083
MISC. PLANT									
151 M&S - Fuel Inventory	11,557,106	0	0	0	0	0	0	0	0
154 Plant M&S	455,452	460,284	667,900	806,875	791,806	871,400	1,648,857	738,076	778,820
164 Fuel Inventory	698,945	1,114,145	1,276,316	1,375,937	1,495,814	1,252,795	4,216,725	927,591	814,506
165 Prepayments	14,643	493,514	620,302	563,007	386,167	320,941	528,546	542,134	633,521

	1987	1988	1989	1990	1991	1992
MANUFACTURED GAS PRODUCTION						
OPERATION		1988	1989	1990	1991	1992
OTHER PROD EXPENSES						
710 Operation Supervision and Engineering						
717 Production Operation Labor						
735 Production Operation Misc						
TOTAL OPERATION EXPENSE	0	0	0	0	0	0
MAINTENANCE						
740 Production Maint Gen'l Supervision						
741 Production Maint Structure & Impl						
742 Production Maint Equipment						
769 Maintenance of Other Equipment						
TOTAL MAINTENANCE	0	0	0	0	0	0
TOTAL MANUF GAS PROD EXPENSE	0	0	0	0	0	0
PURCHASED GAS SUPPLY EXPENSES						
787 Maintenance of Pipe Lines						
798 Natural Gas Well Head Purchases						
799 Natural Gas Well Head Purchases						
800 Natural Gas Well Head Purchases						
800.1 Natural Gas Well Head Purchases, Intra. Co. Transfers						
801 Natural Gas Field Line Purchases						
803 Natural Gas Transmission Line Purchases						
804 Natural Gas City Gate Purchases						
804.1 Liquefied Natural Gas Purchases						
805 Other Gas Purchases						
TOTAL GAS SUPPLY EXP	0	0	0	0	0	0
TOTAL PRODUCTION EXPENSE	0	0	0	0	0	0
TRANSMISSION EXPENSES						
850 Operation Supervision and Eng.						
851 System Control and Load Disp.						
852 Communication System Exp.						
856 Mains Expenses						
857 Meas. and Reg. Station Exp.						
863 Maint. Of Mains						
TOTAL TRANSMISSION EXP						
DISTRIBUTION EXPENSE						
OPERATIONS EXPENSE						
870 Operation Supervision and Eng						
874 Mains and Services Expenses						
875 Measuring and Reg. Station Exp.-Gen.						
876 Measuring and Reg. Station Exp. - Ind.						
877 Meas. & Reg. Station Exp.-City Gate						
878 Meter and House Regulator Exp.						
879 Customer Installations Exp.						
880 Other Expenses						
881 Rents						
TOTAL OPERATION EXP	0	0	0	0	0	0
MAINTENANCE						
885 Maintenance Supervision and Engineering						
886 Maint.of Structures and Improvements						
887 Maintenance of Mains						
889 Maint. of Meas. and Reg. Sta. Equip.-Gen.						
890 Maint. of Meas. and Reg. Sta. Equip.-Ind.						
891 Maint. of Meas. and Reg. Sta. Equip.-City Gate						
892 Maintenance of Services						
893 Maintenance of Meters and House Reg.						
894 Maintenance of Other Equipment						
TOTAL MAINTENANCE EXP	0	0	0	0	0	0
TOTAL DISTRIBUTION EXP	0	0	0	0	0	0

	1993	1994	1995	1996	1997	1998	1999	2000	2001
MANUFACTURED GAS PRODUCTION OPERATION	1993	1994	1995	1996	1997	1998	1999	2000	2001
OTHER PROD EXPENSES									
710 Operation Supervision and Engineering				0	0	0	0	6,673	6,273
717 Production Operation Labor				0	0	0	0	1,458	831
735 Production Operation Misc				189,125	239,127	208,835	254,480	32,671	26,355
TOTAL OPERATION EXPENSE	0	0	0	189,125	239,127	208,835	254,480	40,802	33,460
MAINTENANCE									
740 Production Maint Gen'l Supervision				-	-	-	-	5,012	5,976
741 Production Maint Structure & Impl				-	-	-	-	1,198	434
742 Production Maint Equipment				-	-	-	-	9,278	7,060
769 Maintenance of Other Equipment				68,396	63,064	54,851	52,127	-	-
TOTAL MAINTENANCE	0	0	0	68,396	63,064	54,851	52,127	15,487	13,469
TOTAL MANUF GAS PROD EXPENSE	0	0	0	257,521	302,191	263,686	306,607	56,290	46,929
PURCHASED GAS SUPPLY EXPENSES									
787 Maintenance of Pipe Lines				-	-	-	-	(12,750)	3,407
798 Natural Gas Well Head Purchases				-	-	-	-	12,545,684	11,895,913
799 Natural Gas Well Head Purchases				-	-	-	-	11,106,813	15,326,793
800 Natural Gas Well Head Purchases				21,795,758	22,115,975	15,446,416	19,202,623	147,031	263,467
800.1 Natural Gas Well Head Purchases, Intra. Co. Transfers				-	-	-	-	(1,564,528)	(1,228,752)
801 Natural Gas Field Line Purchases				-	-	-	-	(65,832)	(53,527)
803 Natural Gas Transmission Line Purchases				-	-	-	-	-	-
804 Natural Gas City Gate Purchases				-	-	-	-	-	-
804.1 Liquefied Natural Gas Purchases				84,243	52,342	270,757	949,369	-	-
805 Other Gas Purchases				(340,711)	1,495,478	1,621,713	(2,748,795)	-	-
TOTAL GAS SUPPLY EXP	0	0	0	21,539,290	23,663,795	17,338,886	17,403,197	22,156,418	26,207,302
TOTAL PRODUCTION EXPENSE	0	0	0	21,796,811	23,965,986	17,602,572	17,709,804	22,212,708	26,254,231
TRANSMISSION EXPENSES									
850 Operation Supervision and Eng.				0	0	0	0	188,593	170,002
851 System Control and Load Disp.				0	0	0	0	0	2,487
852 Communication System Exp.				0	0	0	0	10,757	17,793
856 Mains Expenses				0	0	0	0	0	0
857 Meas. and Reg. Station Exp.				0	0	0	0	42,830	53,918
863 Maint. Of Mains				0	0	0	0	0	2,043
TOTAL TRANSMISSION EXP				0	0	0	0	242,180	246,244
DISTRIBUTION EXPENSE									
OPERATIONS EXPENSE									
870 Operation Supervision and Eng				870,955	648,480	754,097	678,706	-	-
874 Mains and Services Expenses				-	-	-	-	434,731	412,373
875 Measuring and Reg. Station Exp.-Gen.				-	-	-	-	-	-
876 Measuring and Reg. Station Exp. - Ind.				-	-	-	-	-	-
877 Meas. & Reg. Station Exp.-City Gate				-	-	-	-	83,805	88,895
878 Meter and House Regulator Exp.				407,945	429,494	434,752	376,374	381,417	364,462
879 Customer Installations Exp.				25,581	69,794	166,355	73,746	591,125	535,694
880 Other Expenses				-	-	-	-	(416,495)	(399,888)
881 Rents				-	-	-	-	1,747	1,928
TOTAL OPERATION EXP	0	0	0	1,304,481	1,147,768	1,355,204	1,128,826	1,076,331	1,003,465
MAINTENANCE									
885 Maintenance Supervision and Engineering				-	-	-	-	563	-
886 Maint.of Structures and Improvements				15,729	17,355	19,089	21,047	21,407	32,541
887 Maintenance of Mains				377,670	243,851	226,720	379,282	283,709	205,860
889 Maint. of Meas. and Reg. Sta. Equip.-Gen.				-	-	-	-	29,433	37,182
890 Maint. of Meas. and Reg. Sta. Equip.-Ind.				-	-	-	-	-	-
891 Maint. of Meas. and Reg. Sta. Equip.-City Gate				-	-	-	-	-	-
892 Maintenance of Services				94,173	79,118	60,743	107,983	118,231	137,131
893 Maintenance of Meters and House Reg.				11,535	23,539	34,628	20,487	12,875	3,719
894 Maintenance of Other Equipment				-	-	-	-	312,407	266,739
TOTAL MAINTENANCE EXP	0	0	0	499,107	363,863	341,180	528,799	778,625	683,171
TOTAL DISTRIBUTION EXP	0	0	0	1,803,588	1,511,631	1,696,384	1,657,625	1,854,956	1,686,636

	2002	2003	2004	2005	2006	2007	2008	2009	2010
MANUFACTURED GAS PRODUCTION OPERATION	2002	2003	2004	2005	2006	2007	2008	2009	2010
OTHER PROD EXPENSES									
710 Operation Supervision and Engineering	2,586	5,735	6,844	6,290	6,964	7,540	6,003	0	0
717 Production Operation Labor	1,450	438	539	578	568	169	83	0	0
735 Production Operation Misc	26,775	22,681	19,071	13,838	15,213	16,968	88,049	566,425	317,188
TOTAL OPERATION EXPENSE	30,812	28,854	26,454	20,706	22,745	24,677	94,135	566,425	317,188
MAINTENANCE									
740 Production Maint Gen'l Supervision	5,772	6,589	6,870	6,436	6,964	7,558	6,003	-	-
741 Production Maint Structure & Impl	2,929	2,774	1,227	234	4,917	2,337	533	5	-
742 Production Maint Equipment	4,474	5,217	13,506	7,499	9,629	8,352	7,489	-	-
769 Maintenance of Other Equipment	-	-	-	-	-	-	-	-	-
TOTAL MAINTENANCE	13,175	14,580	21,603	14,169	21,511	18,247	14,025	5	0
TOTAL MANUF GAS PROD EXPENSE	43,987	43,435	48,057	34,875	44,256	42,923	108,160	566,431	317,188
PURCHASED GAS SUPPLY EXPENSES									
787 Maintenance of Pipe Lines	8,354	-	-	-	-	-	-	-	-
798 Natural Gas Well Head Purchases	11,549,542	8,515,363	4,073,221	7,107,337	6,389,416	6,320,973	7,607,035	(1,996,129)	(1,382,216)
799 Natural Gas Well Head Purchases	10,798,331	30,331,747	32,605,849	42,050,207	32,184,452	29,285,082	39,983,468	(107,303)	(117,901)
800 Natural Gas Well Head Purchases	(781,291)	313,905	17,221	15,597	18,259	27,730	28,977	-	-
800.1 Natural Gas Well Head Purchases, Intra. Co. Transfers	1,765,120	-	-	-	-	-	-	-	-
801 Natural Gas Field Line Purchases	(19,239)	-	-	-	-	-	-	-	-
803 Natural Gas Transmission Line Purchases	-	-	-	-	-	-	-	-	-
804 Natural Gas City Gate Purchases	-	-	-	-	-	-	1,474,835	12,514,705	14,710,277
804.1 Liquefied Natural Gas Purchases	-	-	-	-	-	-	2,132,453	12,150,837	13,682,439
805 Other Gas Purchases	-	(2,267,117)	4,170,022	(675,384)	(8,335)	2,316,302	(2,391,952)	-	-
TOTAL GAS SUPPLY EXP	23,320,818	36,893,898	40,866,313	48,497,758	38,583,791	37,950,086	48,834,816	22,562,110	26,892,598
TOTAL PRODUCTION EXPENSE	23,364,805	36,937,333	40,914,370	48,532,633	38,628,047	37,993,010	48,942,976	23,128,541	27,209,787
TRANSMISSION EXPENSES									
850 Operation Supervision and Eng.	177,162	227,097	212,621	236,483	255,882	248,821	307,171	0	0
851 System Control and Load Disp.	184	0	0	0	0	0	0	0	0
852 Communication System Exp.	19,335	16,199	16,898	10,702	12,104	13,632	26,943	20,261	30,680
856 Mains Expenses	0	0	0	0	0	0	0	395	3
857 Meas. and Reg. Station Exp.	26,935	39,238	41,226	42,983	39,233	35,709	41,266	0	821
863 Maint. Of Mains	22	340	0	547	0	0	0	67	0
TOTAL TRANSMISSION EXP	223,639	282,874	270,745	290,716	307,219	298,161	375,380	20,724	31,504
DISTRIBUTION EXPENSE									
OPERATIONS EXPENSE									
870 Operation Supervision and Eng	-	-	-	-	-	-	155,548	64,421	30,859
874 Mains and Services Expenses	418,784	409,564	410,614	402,560	441,251	456,114	489,191	512,608	562,176
875 Measuring and Reg. Station Exp.-Gen.	-	-	-	-	-	-	3,766	160,482	152,142
876 Measuring and Reg. Station Exp. - Ind.	-	-	-	-	-	-	-	-	-
877 Meas. & Reg. Station Exp.-City Gate	79,121	81,127	75,260	78,488	67,653	74,184	58,111	-	-
878 Meter and House Regulator Exp.	365,756	430,472	424,806	466,131	560,865	560,268	546,903	817,734	804,803
879 Customer Installations Exp.	361,310	332,784	419,791	347,791	309,904	300,100	311,003	108,556	39,486
880 Other Expenses	(496,264)	(453,877)	(568,926)	(563,836)	(563,928)	(541,638)	(557,208)	783,922	711,532
881 Rents	1,046	1,852	1,063	2,080	2,289	2,283	2,821	-	-
TOTAL OPERATION EXP	729,754	801,922	762,608	733,214	818,035	851,311	1,010,135	2,447,724	2,300,999
MAINTENANCE									
885 Maintenance Supervision and Engineering	-	-	-	-	-	-	7,628	111,800	68,440
886 Maint. of Structures and Improvements	20,411	28,250	23,106	38,069	39,649	33,298	37,351	8,234	5,588
887 Maintenance of Mains	216,906	298,390	253,869	221,887	182,359	192,097	249,701	284,070	257,655
889 Maint. of Meas. and Reg. Sta. Equip.-Gen.	20,697	25,662	24,821	23,419	69,957	27,549	35,649	31,393	20,567
890 Maint. of Meas. and Reg. Sta. Equip.-Ind.	-	-	-	-	-	-	-	4,289	(526)
891 Maint. of Meas. and Reg. Sta. Equip.-City Gate	-	-	-	-	-	-	4,109	28,801	28,896
892 Maintenance of Services	103,593	79,878	91,727	75,714	85,714	105,441	104,878	42,538	71,698
893 Maintenance of Meters and House Reg.	5,460	27,656	43,674	57,077	70,242	62,231	28,066	33,576	103,807
894 Maintenance of Other Equipment	178,107	148,373	87,894	25,585	26,056	18,635	18,889	218,606	225,249
TOTAL MAINTENANCE EXP	545,175	608,210	525,092	441,752	473,976	439,250	486,271	763,307	781,373
TOTAL DISTRIBUTION EXP	1,274,929	1,410,131	1,287,701	1,174,966	1,292,011	1,290,561	1,496,405	3,211,031	3,082,372

	1987	1988	1989	1990	1991	1992
	1987	1988	1989	1990	1991	1992
CUSTOMER ACCOUNT						
901 Supervision						
902 Meter Reading Expenses						
903 Customer Records and Collection Expenses						
904 Uncollectible Accounts						
905 Miscellaneous						
907 Cust. Serv & Info Supvn						
908 Cust Assistance Exp						
909 Info & Instruc Advser Exp						
910 Misc Cust Sv & Info Exp						
TOTAL CUSTOMER ACCTS EXP	0	0	0	0	0	0
MARKETING SERVICES EXPENSES						
911 Supervision						
912 Demonstration and Selling Expense						
913 Advertising						
916 Miscellaneous						
TOTAL MARKETING EXPENSE	0	0	0	0	0	0
ADMINISTRATIVE & GENERAL EXP						
920 Salary						
921 Office Supplies						
922 Admin Exp - Transf (Credit)						
923 Outside Services						
924 Property Ins						
925 Injury & Damages						
926 Pension						
927 Franchise Requirements						
928 Regulatory Exp						
929 Duplicate Charges						
930 Misc						
931 Rents						
932 Gen Plt Maint						
935 Maint. Of General Plant						
TOTAL OPERATION EXP	0	0	0	0	0	0
MAINTENANCE						
1803 Rents						
TOTAL A & G EXPENSE	0	0	0	0	0	0
TOTAL O & M EXPENSE	0	0	0	0	0	0
ALLOCABLE O&M EXPENSES	0	0	0	0	0	0
Taxes other than Income						
YEAR	1987	1988	1989	1990	1991	1992
SALES	(FIRM)	#REF!	#REF!	#REF!	#REF!	#REF!
SENDOUT	(FIRM)	#REF!	#REF!	#REF!	#REF!	#REF!
DEMAND	(FIRM)					
BILLED	CUSTOMERS					
DEM(Leadin	0	0	0	0	0	0

		1993	1994	1995	1996	1997	1998	1999	2000	2001
CUSTOMER ACCOUNT		1993	1994	1995	1996	1997	1998	1999	2000	2001
901	Supervision	-	-	-	-	-	-	-	8,937	1,041
902	Meter Reading Expenses	-	-	-	211,316	118,224	158,149	139,204	141,755	141,258
903	Customer Records and Collection Expenses	-	-	-	1,011,174	859,957	402,816	463,653	389,344	439,416
904	Uncollectible Accounts	-	-	-	210,501	314,037	127,463	219,593	335,704	301,693
905	Miscellaneous	-	-	-	-	-	-	-	-	-
907	Cust. Serv & Info Supvn	-	-	-	-	-	-	-	-	-
908	Cust Assistance Exp	-	-	-	-	-	-	-	-	-
909	Info & Instruc Advser Exp	-	-	-	-	-	-	-	-	-
910	Misc Cust Sv & Info Exp	-	-	-	-	-	-	-	-	-
TOTAL CUSTOMER ACCTS EXP		0	0	0	1,432,991	1,292,218	688,428	822,450	875,740	883,409
MARKETING SERVICES EXPENSES										
911	Supervision	-	-	-	271,671	356,960	177,305	236,777	38,208	93,336
912	Demonstration and Selling Expense	-	-	-	301,354	395,962	196,677	262,647	411,240	412,689
913	Advertising	-	-	-	9,182	12,065	5,993	8,003	12,503	1,915
916	Miscellaneous	-	-	-	89,875	118,091	58,657	78,331	9,675	7,811
TOTAL MARKETING EXPENSE		0	0	0	672,083	883,078	438,631	585,758	471,626	515,751
ADMINISTRATIVE & GENERAL EXP										
920	Salary	-	-	-	377,195	564,700	350,345	346,351	536,249	411,410
921	Office Supplies	-	-	-	474,724	417,796	474,381	366,115	406,798	219,748
922	Admin Exp - Transf (Credit)	-	-	-	(2,735,969)	(2,350,555)	(1,334,118)	(1,093,635)	(1,328,173)	(1,112,188)
923	Outside Services	-	-	-	2,994,222	2,493,162	3,164,747	3,004,239	3,637,219	3,702,886
924	Property Ins	-	-	-	0	0	0	0	0	0
925	Injury & Damages	-	-	-	179,576	247,527	197,850	98,199	203,433	142,471
926	Pension	-	-	-	843,461	956,655	762,195	1,065,461	783,982	693,074
927	Franchise Requirements	-	-	-	0	0	0	0	0	0
928	Regulatory Exp	-	-	-	60,779	80,360	94,232	79,230	92,600	65,340
929	Duplicate Charges	-	-	-	0	0	0	0	0	0
930	Misc.	-	-	-	166,028	600,256	780,242	699,324	354,694	315,897
931	Rents	-	-	-	0	0	0	0	0	0
932	Gen Plt Maint	-	-	-	0	0	0	0	0	0
935	Maint. Of General Plant	-	-	-	77,712	61,873	51,480	56,457	51,627	54,025
TOTAL OPERATION EXP		0	0	0	2,437,728	3,071,770	4,541,354	4,621,741	4,738,429	4,492,665
MAINTENANCE										
1803	Rents	-	-	-	-	-	-	-	-	-
TOTAL A & G EXPENSE		0	0	0	2,437,728	3,071,770	4,541,354	4,621,741	4,738,429	4,492,665
TOTAL O & M EXPENSE		0	0	0	28,143,201	30,724,683	24,967,370	25,397,378	30,153,459	33,832,691
ALLOCABLE O&M EXPENSES		0	0	0	3,908,662	3,989,118	3,087,130	3,372,440	3,258,611	3,132,725
Taxes other than Income										
	YEAR	1993	1994	1995	1996	1997	1998	1999	2000	2001
SALES	(FIRM)	#REF!	#REF!	#REF!	#REF!	#REF!	0	1,316,047	6,719,202	6,421,301
SENDOUT	(FIRM)	#REF!	#REF!	#REF!	#REF!	#REF!	0	1,316,047	6,719,202	6,421,301
DEMAND	(FIRM)									
BILLED	CUSTOMERS				21,885	22,490	23,307	23,622	25,564	25,952
DEM(Leadin		0	0	0	0	0	0	0	0	

		2002	2003	2004	2005	2006	2007	2008	2009	2010
		2002	2003	2004	2005	2006	2007	2008	2009	2010
CUSTOMER ACCOUNT										
901	Supervision	6,719	553	128	-	-	-	-	-	-
902	Material Reading Expenses	103,671	119,314	83,385	126,504	154,107	129,309	143,164	149,437	124,019
903	Customer Records and Collection Expenses	508,534	321,239	205,223	213,657	119,756	125,169	224,476	755,940	1,112,845
904	Uncollectible Accounts	550,089	651,944	598,102	564,874	614,326	695,194	551,744	568,204	584,664
905	Miscellaneous	-	-	-	-	-	-	-	-	-
907	Cust. Serv & Info Supvn	-	-	-	-	-	-	-	-	-
908	Cust Assistance Exp	-	-	-	-	-	-	8,602	712,280	912,846
909	Info & Instruc Advser Exp	-	-	-	-	-	-	-	2,840	2,357
910	Misc Cust Sv & Info Exp	-	-	-	-	-	-	8,132	-	-
TOTAL CUSTOMER ACCTS EXP		1,169,013	1,093,050	886,838	905,034	888,189	949,672	936,119	2,188,702	2,736,730
MARKETING SERVICES EXPENSES										
911	Supervision	239,673	277,514	354,944	327,331	307,620	279,573	217,351	-	-
912	Demonstration and Selling Expense	260,371	134,428	136,817	143,598	222,099	280,909	226,806	-	-
913	Advertising	-	-	-	14	-	49,829	5,174	-	-
916	Miscellaneous	346,680	361,918	175,643	2,178	4,661	2,477	4,639	-	-
TOTAL MARKETING EXPENSE		846,724	773,860	667,404	473,121	534,380	612,788	453,970	0	0
ADMINISTRATIVE & GENERAL EXP										
920	Salary	511,776	147,472	55,658	92,274	206,331	211,213	(37,353)	13,488	29,106
921	Office Supplies	536,028	491,618	422,080	394,120	221,377	295,388	262,722	276,238	293,391
922	Admin Exp - Transf (Credit)	(869,552)	(848,848)	(843,265)	(796,476)	(1,113,567)	(1,113,137)	(907,934)	0	0
923	Outside Services	3,647,580	3,037,300	3,881,628	3,564,501	4,034,655	4,645,578	3,711,622	1,066,578	2,160,518
924	Property Ins	0	0	0	0	0	49,034	47,135	13,255	8,015
925	Injury & Damages	108,826	751,284	(283,904)	556,078	432,130	297,661	358,054	215,233	328,719
926	Pension	1,139,598	1,372,359	1,376,018	1,213,675	1,484,008	1,190,594	930,259	1,128,809	1,050,249
927	Franchise Requirements	0	0	0	0	0	0	0	0	0
928	Regulatory Exp	103,798	42,498	165,512	250,414	289,961	191,533	242,391	368,611	111,270
929	Duplicate Charges	0	0	0	0	0	0	0	0	0
930	Misc	166,096	45,420	596,972	494,334	588,530	602,033	467,986	61,078	79,439
931	Rents	0	(18,000)	(15,285)	(18,837)	(19,478)	(19,478)	354	36,875	12,961
932	Gen Plt Maint	0	0	0	0	0	0	0	0	0
935	Maint. Of General Plant	49,652	652,561	549,338	662,682	572,079	556,794	358,185	42,396	129,841
TOTAL OPERATION EXP		5,393,803	5,673,663	5,904,751	6,412,766	6,696,027	6,907,212	5,433,422	3,222,561	4,203,508
MAINTENANCE										
1803	Rents	-	-	-	-	-	-	-	-	-
TOTAL A & G EXPENSE		5,393,803	5,673,663	5,904,751	6,412,766	6,696,027	6,907,212	5,433,422	3,222,561	4,203,508
TOTAL O & M EXPENSE		32,049,274	45,888,038	49,661,063	57,498,520	48,038,653	47,753,243	57,262,893	31,750,834	37,232,398
ALLOCABLE O&M EXPENSES		3,334,653	3,320,476	2,890,000	2,587,997	2,758,835	2,895,945	2,994,655	5,966,163	6,136,291
Taxes other than Income										
	YEAR	2002	2003	2004	2005	2006	2007	2008	2009	2010
SALES	(FIRM)	6,300,621	7,046,708	7,062,664	6,901,256	6,479,042	7,648,965	7,300,963	7,020,039	6,729,580
SENDOUT	(FIRM)	6,300,621	7,046,708	7,062,664	6,901,256	6,479,042	7,648,965	7,300,963	7,020,039	6,729,580
DEMAND	(FIRM)	-	-	-	-	-	-	-	-	-
BILLED	CUSTOMERS	26,439	26,843	26,676	27,172	27,510	27,626	27,925	28,276	28,134
DEM(Leadin	0	0	0	0	0	0	0	0	0	0

Northern Utilities- New Hampshire
 Marginal Cost Study 2011
 Work Paper - Depreciation

	ACCT NO.	BALANCE @ 12/31/10	AVERAGE SERVICE LIFE	NET SALVAGE VALUE
-----	----	-----	----	----
 PRODUCTION PLANT				
 DISTRIBUTION PLANT				
375-Distribution Structures		2,820,320	60.00	-5%
376-Mains		65,458,022	40.90	-25%
378-Distribution M&R Station Equip.		1,787,578	30.00	-5%
380-Services		31,874,279	45.00	-75%
381-Meters		3,506,040	30.00	0%
382-Meter Installations		12,313,745	33.00	-10%
383-Dist. House Regulators		222,731	35.00	0%
386-Dist Water Htrs & Conv. Burners		2,523,018	10.00	0%
TOTAL DISTRIBUTION PLANT		120,505,734	40	-35%

Source: From 2011 Depreciation Study

Northern Utilities- New Hampshire
 Marginal Cost Study 2011
 Work Paper - Mains

Line	Year	New Mains Installed	Growth %	Growth Related Mains	Cost of Mains Installed	Growth Related Cost
1	1988	93,963	17.44%	16,390	1,376,876	240,170
2	1989	67,867	17.44%	11,838	1,419,560	247,615
3	1990	129,695	17.44%	22,623	2,877,384	501,905
4	1991	152,173	17.44%	26,544	4,169,268	727,250
5	1992	133,141	17.44%	23,224	2,635,213	459,663
6	1993	62,793	17.44%	10,953	1,940,823	338,540
7	1994	107,460	17.44%	18,744	2,708,131	472,382
8	1995	110,999	17.44%	19,362	3,791,521	661,359
9	1996	115,065	17.44%	20,071	4,141,936	722,482
10	1997	75,824	17.44%	13,226	2,786,252	486,009
11	1998	60,488	17.44%	10,551	1,742,694	303,980
12	1999	81,150	17.44%	14,155	2,309,728	402,888
13	2000	69,969	17.44%	12,205	1,937,749	338,004
14	2001	50,782	17.44%	8,858	1,819,674	317,408
15	2002	29,683	17.44%	5,178	1,584,376	276,364
16	2003	39,219	14.58%	5,719	1,550,705	226,109
17	2004	60,531	17.04%	10,312	2,189,519	373,000
18	2005	46,363	18.78%	8,709	2,021,770	379,781
19	2006	88,258	13.95%	12,310	4,259,579	594,114
20	2007	52,036	12.84%	6,682	2,897,924	372,119
21	2008	49,367	17.44%	8,611	2,769,890	483,155
22	2009	15,503	20.71%	3,211	1,526,967	316,309
23	2010	0	24.20%	0	0	0

Note:

1. Growth Related % From Growth Related Work Paper.
2. Budget was analysed for 2003-2010, all other years use an average.

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Growth Related

Category	Actual								Forecast				
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Growth (G)	712,534	702,030	934,718	809,866	778,821	0	1,631,400	2,308,700	2,870,098	3,781,609	3,877,633	4,058,737	4,246,750
Non-Growth (NG)	3,278,415	1,845,538	2,340,227	2,937,832	3,711,301	0	2,081,800	3,685,800	3,601,727	5,677,581	5,320,808	5,344,431	5,396,165
CI & BS (CI)	895,758	1,573,371	1,701,037	2,058,748	1,575,050	0	4,162,300	3,546,800	2,500,945	3,225,949	3,419,030	3,526,503	3,682,705
Total	4,886,707	4,120,939	4,975,982	5,806,446	6,065,172	0	7,875,500	9,541,300	8,972,770	12,685,139	12,617,471	12,929,671	13,325,620

Growth % 14.58% 17.04% 18.78% 13.95% 12.84% 20.71% 24.20% 31.99% 29.81% 30.73% 31.39% 31.87%

Average Growth % (Historical) 17.44%
Average Growth % (All Years) 23.16%

Northern Utilities- New Hampshire
 Marginal Cost Study 2011
 Work Paper - Historical Design Day Forecast

Yr Forecasted	Prior Yr Estimate of Current Yr DD	Current Yr Est of Current Yr DD
1989		
1990	0	
1991	0	
1992	0	
1993	0	
1994	0	
1995	0	
1996	0	519,260
1997	519,260	534,600
1998	534,600	541,340
1999	541,340	525,529
2000	525,529	520,249
2001	520,249	517,753
2002	517,753	528,031
2003	528,031	538,347
2004	538,347	567,560
2005	567,560	545,734
2006	545,734	512,792
2007	512,792	571,784
2008	571,784	582,530
2009	582,530	565,572
2010	565,572	569,539

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Sendout Data

			System Sendout Data												
Description			1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MONTHLY SENDOUT															
Monthly Sendout	1	January			10,350,647	10,295,544	8,352,647	11,451,704	12,734,965	11,467,136	8,831,641	10,645,027	10,323,712	11,572,258	10,714,827
	2	February			8,570,482	8,932,941	7,674,624	9,681,728	9,455,863	8,775,592	8,575,955	10,757,622	9,807,466	8,847,480	8,899,698
	3	March			7,344,801	7,912,260	8,470,495	8,089,131	7,877,296	8,596,860	7,686,932	9,088,529	9,234,784	8,445,053	7,173,055
	4	April			5,535,394	5,119,882	4,903,509	6,040,575	5,470,649	5,055,496	4,652,680	6,489,987	5,905,743	5,486,748	4,622,481
	5	May			3,780,234	3,252,227	3,733,887	3,986,935	3,599,074	4,517,161	3,996,786	4,027,909	4,091,380	3,399,219	3,340,902
	6	June			2,906,823	2,730,131	2,692,997	2,744,180	2,960,364	2,924,753	3,309,848	3,298,017	2,887,619	2,912,863	2,847,153
	7	July			2,644,491	2,772,100	2,412,278	2,674,232	2,743,713	2,673,326	2,947,618	3,246,367	2,768,488	2,976,065	2,669,714
	8	August			2,893,311	2,777,801	2,540,653	2,635,944	2,792,239	2,657,725	3,230,347	3,368,791	2,804,686	2,759,513	2,932,046
	9	September			3,008,711	2,932,912	2,575,965	2,732,887	2,912,813	2,739,434	3,290,425	3,572,199	3,319,459	3,033,248	2,938,932
	10	October			4,468,465	4,430,078	4,235,625	4,742,349	4,471,659	4,331,862	4,495,171	4,536,653	5,091,883	4,960,304	4,616,472
	11	November		5,370,513	5,988,636	5,682,863	6,288,062	6,572,672	6,388,139	6,015,173	5,739,429	7,228,695	7,131,852	5,760,592	6,587,895
	12	December		7,789,955	9,700,026	7,374,273	9,125,463	9,114,747	9,219,869	9,258,047	8,033,590	10,229,854	9,642,555	10,047,052	9,952,627
Total															
Total Sendout			0	13,160,467	67,192,022	64,213,012	63,006,206	70,467,084	70,626,642	69,012,563	64,790,421	76,489,650	73,009,627	70,200,394	67,295,800
Less															
Used By Company															
Unaccounted For															
Total Sales			0	13,160,467	67,192,022	64,213,012	63,006,206	70,467,084	70,626,642	69,012,563	64,790,421	76,489,650	73,009,627	70,200,394	67,295,800

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Sendout Data

Calendar Month EDD

January		1,437	1,328	1,083	1,548	1,645	1,444	1,078	1,226	1,207	1,489	1,304
February		1,109	1,161	1,002	1,300	1,106	1,106	1,139	1,316	1,141	1,115	1,045
March		835	1,095	940	1,058	947	1,093	948	1,036	1,052	1,018	801
April		637	623	586	733	588	571	559	721	597	559	467
May		347	288	329	396	281	500	333	276	318	291	210
June		104	48	132	101	88	97	79	95	55	129	55
July		25	12	11	4	12	13	0	11	0	41	2
August		20	2	24	12	38	1	42	30	16	22	6
September		186	138	80	102	128	63	139	120	140	169	91
October		490	404	552	505	485	436	476	322	515	546	490
November	682	779	669	836	737	782	734	615	843	804	637	760
December	1,075	1,322	956	1,194	1,109	1,158	1,197	947	1,244	1,184	1,214	1,203

Total Annual	1,757	7,291	6,724	6,769	7,605	7,258	7,255	6,355	7,240	7,029	7,230	6,434

Year 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Degree Days per Day

31 January			46	43	35	50	53	47	35	40	39	48	42
28 February			40	41	36	46	40	40	41	47	41	40	37
31 March			27	35	30	34	31	35	31	33	34	33	26
30 April			21	21	20	24	20	19	19	24	20	19	16
31 May			11	9	11	13	9	16	11	9	10	9	7
30 June			3	2	4	3	3	3	3	3	2	4	2
31 July			1	0	0	0	0	0	0	0	0	1	0
31 August			1	0	1	0	1	0	1	1	1	1	0
30 September			6	5	3	3	4	2	5	4	5	6	3
31 October			16	13	18	16	16	14	15	10	17	18	16
30 November		23	26	22	28	25	26	24	21	28	27	21	25
31 December		35	43	31	39	36	37	39	31	40	38	39	39

Sendout per Day

January			333,892	332,114	269,440	369,410	410,805	369,908	284,892	343,388	333,023	373,299	345,640
February			306,089	319,034	274,094	345,776	337,709	313,414	306,284	384,201	350,267	315,981	317,846
March			236,929	255,234	273,242	260,940	254,106	277,318	247,966	293,178	297,896	272,421	231,389
April			184,513	170,663	163,450	201,353	182,355	168,517	155,089	216,333	196,858	182,892	154,083
May			121,943	104,911	120,448	128,611	116,099	145,715	128,929	129,933	131,980	109,652	107,771
June			96,894	91,004	89,767	91,473	98,679	97,492	110,328	109,934	96,254	97,095	94,905
July			85,306	89,423	77,815	86,266	88,507	86,236	95,084	104,722	89,306	96,002	86,120
August			93,333	89,606	81,957	85,030	90,072	85,733	104,205	108,671	90,474	89,017	94,582
September			100,290	97,764	85,866	91,096	97,094	91,314	109,681	119,073	110,649	101,108	97,964
October			144,144	142,906	136,633	152,979	144,247	139,737	145,006	146,344	164,254	160,010	148,918
November	179,017		199,621	189,429	209,602	219,089	212,938	200,506	191,314	240,956	237,728	192,020	219,597
December	251,289		312,904	237,880	294,370	294,024	297,415	298,647	259,148	329,995	311,050	324,098	321,052

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Sendout Data

Design Day Demand Estimates

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Regression													
Design Day Effective Degree Days	80	80	80	80	80	80	80	80	80	80	80	80	80
Base Load Use (per day)		41,461	72,254	73,756	65,289	71,469	69,942	71,191	84,216	90,146	78,887	69,447	75,579
Heating Increment		6,051	5,600	5,550	5,784	5,836	6,220	5,932	5,357	6,020	6,296	6,202	6,175
R-Squared		100.0%	98.3%	97.5%	96.4%	98.9%	98.3%	98.0%	96.5%	98.7%	98.9%	98.7%	98.2%
Correction Factor:	100%												
Design Day Estimate		525,529	520,249	517,753	528,031	538,347	567,560	545,734	512,792	571,784	582,530	565,572	569,539
Base Use and Heating Increment													
Base Use (per Day) - Avg July & August			89,319	89,515	79,886	85,648	89,290	85,985	99,645	106,696	89,890	92,509	90,351
Heating Increment			4,927	4,750	5,161	5,221	5,467	5,247	4,657	5,368	5,798	5,317	5,374
Design Day Estimate			483,456	469,517	492,727	503,339	526,610	505,766	472,185	536,156	553,756	517,897	520,263

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Class Data

	R-6&R-11	R-5&R-10		G-40	G-50	G-41	G-51	G-42	G-52	
	----- Residential -----		Incl. in R3 &4	----- Small C&I -----		----- Medium C&I -----		----- Large C&I -----		Total
	ResNonHt&LI	RESHT&LI	ResHtLowInc	SmHiW	SmLoW	MdHiW	MdLoW	LgHiW	LgLoW	Company
CUSTOMERS (Sales&Transp.)	1,653	20,262		4,416	969	543	234	30	27	28,134
WINTER SALES (DTherms) (S&T)	242,651	12,947,562		7,326,994	1,351,750	8,741,511	2,312,830	3,926,891	6,934,231	43,784,420
SUMMER SALES	118,757	2,871,684		1,183,653	859,566	2,043,743	1,546,729	1,536,441	4,456,197	14,616,770
DESIGN DAY LOAD - DTherms (S&T)	2,492	168,098		100,487	12,439	112,415	21,124	48,711	60,320	526,087
NUMBER OF SERVICES (year end 2010)										
NUMBER OF METERS (active and inactive @ year end 2010)										
METER COST	459	459		3,089	3,089	6,746	6,746	12,000	12,000	
SERVICE COST	4,137	4,137		5,045	5,045	7,424	7,424	34,416	34,416	
Total Annual Bills Sales & Transportation										0
Total Annual Bills Transportation										0
CALENDAR MONTH DATA (Weather Normalized Therms) - Sales Only										
Total Winter	243,871	13,012,625		6,430,139	977,261	5,229,635	1,370,442	771,186	46,518	28,081,678
Total Summer	119,354	2,886,115		884,291	713,185	1,115,735	919,448	184,036	46,433	6,868,598
Total	363,224	15,898,740		7,314,430	1,690,445	6,345,371	2,289,891	955,222	92,952	34,950,275
Design Day Load Sales - Therms	2,492	168,098		89,660	8,393	68,962	12,326	9,746	547	360,226
CALENDAR MONTH DATA (Weather Normalized Therms) - Sales & Transportation										
Total Winter	242,651	12,947,562		7,326,994	1,351,750	8,741,511	2,312,830	3,926,891	6,934,231	43,784,420
Total Summer	118,757	2,871,684		1,183,653	859,566	2,043,743	1,546,729	1,536,441	4,456,197	14,616,770
Total	361,408	15,819,246		8,510,647	2,211,315	10,785,254	3,859,559	5,463,332	11,390,428	58,401,190
Design Day Load S&T - Therms	2,492	168,098		100,487	12,439	112,415	21,124	48,711	60,320	526,087

Note:

Northern Utilities- New Hampshire
 Marginal Cost Study 2011
 Work Paper - Reinforcements

Line	Description	Year		Total	
1	Reinforcements			Dollars (\$)	
2	Year 0	2010	2011	\$ -	
3	Year 1	2011	2012	\$ 1,935,000	
4	Year 2	2012	2013	\$ -	
5	Year 3	2013	2014	\$ -	
6	Year 4	2014	2015	\$ -	
7	Year 5	2015	2016	\$ -	
8	Year 6	2016	2017	\$ 300,000	
9	Year 7	2017	2018	\$ -	
10	Year 8	2018	2019	\$ -	
11	Year 9	2019	2020	\$ 1,913,750	
12	Year 10	2020	2021	\$ -	
13	Total			\$ 4,148,750	Computed
14					Design
15					Day Load
16	System Flow - Design Day Peak Hour			Therm/Hr	
17	Year 0	2010	2011	-	-
18	Year 1	2011	2012	73,439	1,468,787
19	Year 2	2012	2013	75,252	1,505,034
20	Year 3	2013	2014	76,724	1,534,477
21	Year 4	2014	2015	78,226	1,564,510
22	Year 5	2015	2016	79,757	1,595,144
23	Year 6	2016	2017	81,319	1,626,390
24	Year 7	2017	2018	82,913	1,658,261
25	Year 8	2018	2019	84,538	1,690,769
26	Year 9	2019	2020	86,196	1,723,928
27	Year 10	2020	2021	87,887	1,757,749
28	Total Incremental			144,481	2,889,624
29					
30	Typical Ratio for Design Hour				
31	to Design Day Load		20		
32					
33	Design Day Load Increase			2,889,624	
34	Incremental Cost Over Period			\$ 1.44	

Note

Northern Utilities- New Hampshire
Marginal Cost Study 2011
Work Paper - Uncollectibles

	Acct 904	Gas Cost Related Bad Debt Credit Acct 90400	904 w/ Gas Removed	Total Annual Revenues	Uncoll % Revenues	Delivery Revenues	Uncoll % gas removed
R-5&R-10	252,345	93,014	\$159,331	\$28,166,871	0.9%	8,599,677	1.85%
R-6&R-11	6,076	1,980	\$4,096	\$940,667	0.6%	506,169	0.81%
G40	46,015	38,932	\$7,083	\$13,627,576	0.3%	4,289,787	0.17%
G50	9,271	7,362	\$1,909	\$2,804,087	0.3%	931,201	0.21%
G41	37,772	32,336	\$5,436	\$10,683,107	0.4%	2,724,275	0.20%
G51	10,979	9,978	\$1,001	\$3,465,299	0.3%	906,734	0.11%
G42	4,769	4,677	\$92	\$2,246,522	0.2%	1,078,110	0.01%
G52	355	355	\$0	\$2,063,560	0.0%	1,932,912	0.00%
Total	367,581	188,634	178,947	\$63,997,689	3.1%	20,968,864	0.85%

Notes



February 2011



Short-Term Energy Outlook

February 8, 2011 Release

Highlights

- EIA expects the price of WTI crude oil to average about \$93 per barrel in 2011, \$14 higher than the average price last year. For 2012, EIA projects that WTI prices will continue to rise, averaging \$98 per barrel. EIA's forecast assumes U.S. real gross domestic product (GDP) grows 3.0 percent in 2011 and 2.8 percent in 2012, while world real GDP (weighted by oil consumption) grows by 3.9 percent and 4.0 percent, respectively, in 2011 and 2012.
- EIA expects regular-grade motor gasoline retail prices to average \$3.15 per gallon in 2011, 37 cents per gallon higher than the 2010 average, and \$3.30 per gallon in 2012, with prices forecast to average about 5 cents per gallon higher in each year during the peak driving season (April through September). There is regional variation in the forecast, with average expected prices on the West Coast about 25 cents per gallon above the national average during the peak driving season. There is also significant uncertainty surrounding the forecast, with the current market prices of futures and options contracts for gasoline suggesting a 35 percent probability that the national monthly average retail price for regular gasoline could exceed \$3.50 per gallon during summer 2011 and about a 10 percent probability that it could exceed \$4.00 per gallon. Rising crude oil prices are the primary reason for higher retail prices, but higher refining margins are also expected to contribute.
- EIA estimates that natural gas working inventories ended January 2011 at 2.3 trillion cubic feet (Tcf), about 30 billion cubic feet (Bcf) or 1 percent below the 2010 end-of-January level. Inventories are expected to remain high through 2011. The projected Henry Hub natural gas spot price averages \$4.16 per million Btu (MMBtu) for 2011, \$0.22 per MMBtu lower than the 2010 average. EIA expects the natural gas market to begin to tighten in 2012, with the Henry Hub spot price increasing to an average of \$4.58 per MMBtu.