

**ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH**  
**Revenue Requirement**

	Reference	National Grid Pro Forma	Staff Pro Forma
Rate Base Proposed	SPF-3	169,006,100	167,670,003
Rate of Return	SPF-4	9.09%	7.59%
Income Required		15,370,193	12,719,609
Adjusted Net Operating Income	SPF-2	8,576,531	10,930,981
Deficiency		6,793,662	1,788,628
Tax Effect		1.6814	1.6814
<b>Revenue Deficiency</b>		<b>11,422,719</b>	<b>3,007,361</b>

**Percent Increase - Base Revenues**

Revenue Deficiency		11,422,719	3,007,361
Test Year Base Revenues	EN 2-2 (margin)	44,972,784	44,972,784
<b>Percent Increase</b>		<b>25.40%</b>	<b>6.69%</b>

**Percent Increase - Total Revenues**

Revenue Deficiency		11,422,719	3,007,361
Test Year Revenues	EN 2-2 (revenue)	175,770,353	175,770,353
<b>Percent Increase</b>		<b>6.50%</b>	<b>1.71%</b>

	National Grid Proposed As Filed	Staff Proforma Adjustments	Staff Recommended
Operating Revenues (EN 2-2-1)	164,359,571		164,359,571
Residential Non-heat to Heat Conversions		70,384	
Test Year Main & Service Additions		669,438	
<b>Operating Revenues</b>	<b>164,359,571</b>	<b>739,822</b>	<b>165,099,393</b>
Operation & Maintenance Expenses (EN 2-2-1)	141,109,499		141,109,499
Agreed upon adjustment per DR Staff Tech 3-43		(331,181)	
Advertising & Promotional		(389,414)	
Health & Hospitalization (Cunningham Testimony)		(21,968)	
Brand Conversion		(119,638)	
ERP write-off		(95,633)	
Bonus Pay tied to Financial Targets		(181,679)	
Eliminate Employee Position		(69,090)	
Eliminate Compressor Leases		(4,000)	
Eliminate Trailer Leases		(7,000)	
Travel Restrictions		(22,180)	
Bad Debt (Gay Testimony)		(2,117,430)	
Pension (Cunningham Testimony)		426,912	
OPEB (Cunningham Testimony)		(471,284)	
<b>Total Operation &amp; Maintenance Expenses</b>	<b>141,109,499</b>	<b>(3,403,585)</b>	<b>137,705,914</b>
Depreciation	8,042,552		8,042,552
Cunningham (10/22/10)		(154,097)	
Depreciation	8,042,552	(154,097)	7,888,455
Taxes Other Than Income Taxes (EN 2-2-3 p. 1)	4,789,918		4,789,918
interest exp on customer deposit (EN 2-2-6)	19,557		19,557
<b>Total Operating Revenue Deductions</b>	<b>153,961,526</b>	<b>(3,557,682)</b>	<b>150,403,844</b>
<b>Operating Income Before Federal Income Taxes</b>	<b>10,398,045</b>	<b>4,297,504</b>	<b>14,695,549</b>
State Income Taxes (EN 2-2-5 p. 1)	382,057	407,550	789,607
Federal Income Taxes (EN 2-2-5 p. 2)	1,439,457	1,535,504	2,974,961
Total Income Taxes	1,821,514	1,943,054	3,764,568
<b>Operating Income After Federal &amp; State Income Taxes</b>	<b>8,576,531</b>	<b>2,354,450</b>	<b>10,930,981</b>

	<u>National Grid</u>	<u>Staff</u>
<b>Calculation of Bad Debt Expense for Delivery Rates</b>		
Total Pro Forma Revenues (SPF-2)	164,359,571	165,099,393
Gas Revenues (EN 2-2)	<u>112,156,610</u>	<u>112,156,610</u>
Delivery Revenue	52,202,961	52,942,783
EnergyNorth Bad Debt Percentage (EN 2-2-2 Schedule 14 p. 2)	3.36%	
Staff Bad Debt Percentage (Gay 10/22/10)		2.06%
<b>Bad Debt Expense for Delivery Rates</b>	<b>1,752,748</b>	<b>1,090,621</b>
<b>Bad Debt Expense for COG Rates</b>	<b><u>3,765,730</u></b>	<b><u>2,310,426</u></b>
<b>Total Bad Debt Expense</b>	<b>5,518,478</b>	<b>3,401,047</b>
<b>Bad Debt Adjustment</b>		(2,117,430)

ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH  
State & Federal Income Tax Computation - Utility Operations

	National Grid	Staff
<b>Calculation of State Income Tax</b>		
Operating Income Before Income Taxes & Interest Charges (SPF-2)	10,398,045	14,695,549
Permanent Differences (EN 2-2-5 p. 2 & 3)	(4,941)	(4,941)
Interest Deduction (See note below)	<u>(5,898,313)</u>	<u>(5,401,113)</u>
Operating Income Before Taxes (p. 1)	4,494,791	9,289,495
<b>State Income Tax (tax rate 8.5%)</b>	<b><u>382,057</u></b>	<b><u>789,607</u></b>
Income Subject to Federal Income Tax (income less state tax)	4,112,734	8,499,888
<b>Federal Income Tax (tax rate 35%)</b>	<b><u>1,439,457</u></b>	<b><u>2,974,961</u></b>
<b>Total Federal &amp; State Taxes</b>	<b><u>1,821,514</u></b>	<b><u>3,764,568</u></b>
Note: Calculation of Interest Deduction		
Rate Base Proposed	169,006,099	167,670,003
Long Term Debt (National Grid & Staff) & Short Term Debt (Staff)	<u>3.49%</u>	<u>3.22%</u>
Interest Deduction	5,898,313	5,401,113

**ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH**  
**Average Rate Base**

	<b>Total Gas Plant In Service</b>	<b>Noninterest Bearing CWIP</b>	<b>Reserve for Depreciation (1)</b>	<b>(Total) Net Utility Plant Service</b>
June 2008	286,595,350	281,767	(99,418,734)	187,458,383
July	287,451,339	3,523,874	(100,031,149)	190,944,064
August	288,276,509	4,340,681	(100,665,696)	191,951,494
September	289,875,225	4,373,693	(101,221,337)	193,027,581
October	290,566,073	4,776,403	(101,850,443)	193,492,033
November	294,529,527	3,532,409	(102,508,222)	195,553,714
December	298,931,548	1,607,264	(103,333,074)	197,205,738
January	300,212,892	727,530	(103,901,364)	197,039,058
February	300,419,343	1,136,922	(104,013,596)	197,542,669
March	301,405,300	1,031,913	(104,672,240)	197,764,973
April	302,320,874	769,517	(105,391,735)	197,698,656
May	303,543,029	945,727	(106,085,619)	198,403,137
June 2009	308,862,633	-	(106,480,932)	202,381,701
Subtotal	3,852,989,642	27,047,700	(1,339,574,141)	2,540,463,201
Less:				
1/2 June 06	143,297,675	140,884	(49,709,367)	93,729,192
1/2 June 07	154,431,317	-	(53,240,466)	101,190,851
	297,728,992	140,884	(102,949,833)	194,920,042
Total	3,555,260,651	26,906,817	(1,236,624,308)	2,345,543,159
Average (Total ÷ 12)	296,271,721	2,242,235	(103,052,026)	195,461,930
Forecasted Non Growth Capital				
July 1, 2009 - Sept 30, 2010	9,575,890		(6,466,136)	3,109,754
Total June 2009 & Non Growth	318,438,523		(112,947,068)	205,491,455
Adjustment Per DR Staff Tech 3-43	(1,281,821)		32,000	(1,249,821)
			<b>National Grid</b>	<b>Staff</b>
Net Utility Plant in Service			205,491,455	201,131,880
Customer Deposits & Interest Accrued on Deposits			(434,601)	(434,601)
Property Base Adjustments (p. 2)			(37,110,702)	(34,710,702)
Adjusted Property Base			167,946,152	165,986,577
Working Capital (p. 3) (2)			1,059,948	1,683,426
Rate Base			169,006,100	167,670,003

(1) Includes:

- (a) Includes Asset Retirement Obligation in Account (2300K) and other deferred credits in Depreciation Reserve averaging (\$838,807).
- (b) Includes Contributions in aid of construction (27100 & 27101) averaging \$10,403.

(2) Company working capital in original filing (1/26/10), not updated for Normand Testimony filed 4/23/10 and reflected on SPF-3 p.3 of 3.

**ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH**  
**Summary of Property Base Adjustments**

	<b>National Grid Pro Forma</b>	<b>Staff Pro Forma</b>
Unamortized Deferred Assets (EN 2-4 p. 3 of 5)	2,757,128	2,757,128
Deferred Income Tax (EN 2-4 p. 4 of 5)		
Property Related	(66,337,608)	(66,337,608)
Investment Tax Credit	(313,325)	(313,325)
Property Base Adjustment	(2,789,398)	(2,789,398)
Fixed Asset Study	32,572,501	32,572,501
Accounting Change Fiscal Year 2010	(2,000,000)	(600,000)
Accounting Change Fiscal Year 2011	(1,000,000)	
Total Deferred Income Tax	(39,867,830)	(37,467,830)
<b>Net Property Base Adjustment</b>	<b>(37,110,702)</b>	<b>(34,710,702)</b>

ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH  
Cash Working Capital Allowance

	National Grid Pro Forma		Staff Pro Forma
Test Year O&M (SPF-2)	141,109,499	137,705,914	137,705,914
Plus Taxes Other Than Income Taxes (SPF-2)	4,789,918	4,789,918	4,789,918
Plus Income Taxes (SPF-2)	1,821,515	3,764,568	3,765,834
Plus Provision for Deferred Taxes (PMN-LL-2 p. 3 of 3)*	2,794,596	5,768,824	5,769,997
Interest on Long-term Debt (PMN-LL-2 p. 1 of 3)	5,898,313	5,898,313	5,898,313
Interest on Short-term Debt (PMN-LL-2 p. 1 of 3)	344,791	344,791	344,791
Less Uncollectible (SPF-2)	(5,518,477)	(3,401,047)	(2,542,531)
Net of Revenue less Expense Lag	151,240,155	154,871,280	155,732,236
Purchased Gas Supply	112,156,611		112,156,611
Supply Cash Allowance at 14.273/365	3.9104%		3.9104%
Supply - Cash Working Capital Allowance	4,385,813		4,385,813
Delivery (Net less Supply) - Cash Working Capital Allowance	39,083,544		43,575,625
Delivery Cash Allowance at 14.08/365	3.8563%		3.8563%
<b>Delivery - Cash Working Capital Allowance</b>	<b>1,507,192</b>		<b>1,680,407</b>
Total Cash Working Capital Allowance	5,893,005		6,066,220
<b>Prepayments June 30, 2009 (EN 2-4 p. 2 of 3)</b>	<b>3,019</b>		<b>3,019</b>
Total Delivery Working Capital	1,510,211		1,683,426

\* Staff Provision for Def Taxes calculated as follows:

Company Provision for Def Inc Tax/Company Income Taxes	153.24%
Staff Inc Tax * (Company Prov for Def Inc Tax/Company Inc Taxes)	5,768,824

**ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH**  
**Overall Rate of Return**  
**For Ratemaking Purposes**

Item	Component Ratio (%)	Component Cost Rate(%)	Weighted Average Cost Rate (%)
Common Stock	50.00%	9.00%	4.500%
Long Term Debt	42.73%	6.89%	2.944%
Short Term Debt	7.27%	1.95%	0.142%
Total	100%		7.586%



**ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH**  
**Revenue Adjustment for Test Year Main & Service Additions**

Month	Main Investments	Service Investments	Total Main & Service Investments	Annual Revenue Percentage	Test Year Monthly Revenue	Months Recovered	Test Year Revenue	Future Annual Revenue	Incremental Increase in Revenue
July	86,034	0	86,034	25%	1,792	11.5	20,612	21,509	896
Aug	173,767	0	173,767	25%	3,620	10.5	38,012	43,442	5,430
Sept	330,613	0	330,613	25%	6,888	9.5	65,434	82,653	17,219
Oct	144,131	0	144,131	25%	3,003	8.5	25,523	36,033	10,510
Nov	338,414	1,862,665	2,201,079	25%	45,856	7.5	343,919	550,270	206,351
Dec	355,633	255,450	611,083	25%	12,731	6.5	82,751	152,771	70,020
Jan	91,409	470,838	562,247	25%	11,713	5.5	64,424	140,562	76,138
Feb	70,893	0	70,893	25%	1,477	4.5	6,646	17,723	11,077
Mar	(96,215)	16,409	(79,806)	25%	(1,663)	3.5	(5,819)	(19,952)	(14,132)
Apr	510,932	0	510,932	25%	10,644	2.5	26,611	127,733	101,122
May	67,114	302,577	369,691	25%	7,702	1.5	11,553	92,423	80,870
June	98,503	335,321	433,824	25%	9,038	0.5	4,519	108,456	103,937
	2,171,228	3,243,260	5,414,488				684,184	1,353,622	669,438

## Notes:

Revenue producing main & service growth from Fleck testimony, Attachment SLF-1 p. 1 of 17

main & service monthly additions per Staff Tech 3-26

Assume all mains & services satisfy '25 Percent Test' (National Grid tariff p. 11) whereby:

est. annual margin must be equal to or greater than 25% of est. construction cost, and

est annual margin is equal to est. revenue to be derived from monthly customer & delivery charge

Assume est. annual margin equals 25% of construction cost

**ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH**  
**Revenue Adjustment for Residential Non-heat Converting to Heat**

## Test Year:

Non-heat to Heat conversions	343
Average base revenue for residential heat customer	\$352
Average base revenue for residential non-heat	\$152
Additional annual base revenue per conversion	\$200

Month	Monthly Conversions	Incremental Monthly Revenue	Months Recovered	Test Year Revenue	Future Annual Revenue	Incremental Increase in Revenue
July	29	\$476	11.5	\$5,478	\$5,717	\$238
Aug	29	\$476	10.5	\$5,002	\$5,717	\$715
Sept	29	\$476	9.5	\$4,526	\$5,717	\$1,191
Oct	29	\$476	8.5	\$4,049	\$5,717	\$1,667
Nov	29	\$476	7.5	\$3,573	\$5,717	\$2,144
Dec	29	\$476	6.5	\$3,097	\$5,717	\$2,620
Jan	29	\$476	5.5	\$2,620	\$5,717	\$3,097
Feb	29	\$476	4.5	\$2,144	\$5,717	\$3,573
Mar	29	\$476	3.5	\$1,667	\$5,717	\$4,049
Apr	29	\$476	2.5	\$1,191	\$5,717	\$4,526
May	29	\$476	1.5	\$715	\$5,717	\$5,002
June	29	\$476	0.5	\$238	\$5,717	\$5,478
	343			\$34,300	\$68,600	\$34,300

## July 2009 through June 2010

Non-heat to Heat conversions	186
Average base revenue for residential heat customer	\$346
Average base revenue for residential non-heat	\$152
Additional annual base revenue per conversion	\$194
Additional annual revenue for all conversions	\$36,084

Adjustment to test year revenues	\$34,300
Adjustment to annualize conversion for 12 month post test year	\$36,084
Total	<u>\$70,384</u>

## Notes:

Conversions and average base revenue from Company response to OCA 2-83  
Test Year conversions assumed to occur equally over 12 months

**ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH**  
**Travel Restriction Savings**

## US Travel Expenses

Source: DR Staff 1-57(a) p. 1 of 4

	<u>2008</u>	<u>2009</u>
July	1,147,214	495,763
Aug	1,080,643	504,312
Sept	1,359,115	716,647
Oct	1,493,988	757,863
Nov	1,005,008	620,001
Dec	<u>714,200</u>	<u>391,667</u>
Total	6,800,168	3,486,253

2009 expense as percentage of 2008 expense	51.27%
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## NH Non-rate case travel expenses

Source: DR OCA 2-58 (c) p.2 of 3

	<u>2008</u>
July	7,162
Aug	6,320
Sept	8,020
Oct	10,218
Nov	4,851
Dec	<u>8,942</u>
Total	45,513

US travel savings percentage	<u>51.27%</u>
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Adjusted NH Expense	23,333
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Adjustment to Travel Expense (actual - adjusted)	<u><u>(22,180)</u></u>
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## Notes:

Assumes travel restrictions effective January 1, 2009.

Assumes NH travel savings identical to US travel savings

**Stephen P. Frink**

**Educational & Professional Experience**

Mr. Frink graduated from the University of New Hampshire with a Bachelor of Arts degree in Sociology in 1977 and a Masters in Business Administration in 1980. He attended and completed Depreciation Programs sponsored by Depreciation Programs, Inc. at Grand Rapids, Michigan in 1992, 1993, 1994 and is a member in good standing of the Society of Depreciation Professionals since 1994.

In 1981, Mr. Frink worked as a High School Math Teacher in Manchester, New Hampshire.

In 1982, Mr. Frink relocated to Texas and worked as an Auditor for Dallas County. He audited various county departments and performed monthly reconciliations of various fund accounts.

In 1985, Mr. Frink went to work for Schenley Industries, Inc., a wholesale liquor distributor located in Dallas, Texas, where he audited national and international manufacturing plants.

In 1986, Mr. Frink left Schenley to work for the City of Dallas as a Budget/Financial Analyst, where he prepared and monitored budgets, prepared pro forma statements, amortization schedules and performed cash flow analysis. He was promoted to Senior Analyst in 1987.

In 1988, Mr. Frink left the City of Dallas to work for the City of Austin as a Financial Analyst. There he prepared budgets and fiscal impact statements, developed a capital projects tracking and monitoring system, and provided training and technical assistance in the implementation of a new accounting system.

In 1990, Mr. Frink joined the Finance staff of the New Hampshire Public Utilities Commission. Working as a member of the PUC Audit Team, he conducted or participated in audits of the books and records of public utilities. He performed desk audits and determined rates of returns. He prepared schedules and exhibits supporting testimony in dockets involving rate increases and participated in settlement conferences. In 1995, Mr. Frink became a full time Analyst for the Finance Department and in 1996 was promoted to a Senior Analyst position, primarily responsible for analyzing and advising the Commission on issues of depreciation, cost of gas adjustment filings, special contracts, and finance and rate increase petitions. In 1998, Mr. Frink was promoted to Assistant Finance Director. As Assistant Finance Director, he assisted in the direction of all aspects of a department responsible for the audit, analysis and review of public utility financial operations, including financing, rate cases and various utility studies filings related to public utility regulation. In 2001, New Hampshire Public Utilities Commission operations were restructured and Mr. Frink became Assistant Director of the Gas & Water Division and now administers all aspects of regulation of gas utilities.