



**STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION**

Docket No. DG 20-105

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities  
Distribution Service Rate Case

**DIRECT TESTIMONY  
OF  
KENNETH A. SOSNICK**

July 31, 2020

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## ATTACHMENTS

<b>Attachment</b>	<b>Title</b>
KAS-2	Summary of the Functional Cost Study
KAS-3	Functional Cost Study – Account Level Detail

1 **I. INTRODUCTION AND BACKGROUND**

2 **Q. Please state your full name, position, and business address.**

3 A. My name is Kenneth A. Sosnick. My business address is 200 State Street, 9th Floor,  
4 Boston, Massachusetts.

5 **Q. By whom are you employed, and in what position?**

6 A. I am employed by FTI Consulting (“FTI”) as Managing Director.

7 **Q. Please describe FTI’s Power and Utilities practice.**

8 A. FTI is a worldwide consulting firm dedicated to helping organizations manage change,  
9 mitigate risk, and resolve disputes. Our Power & Utilities practice brings these services  
10 to firms in regulated and competitive energy industries. The services we provide our  
11 utility clients include expert testimony, regulatory advice, support for strategic decision-  
12 making, and advice regarding investments and capital allocation. Our team is comprised  
13 of former utility executives, regulators, investors, and financial analysts that combine for  
14 hundreds of years of experience in the regulated energy space.

15 FTI is an independent global business advisory firm dedicated to helping organizations  
16 manage change, mitigate risk, and resolve disputes: financial, legal, operational, political  
17 and regulatory, reputational and transactional. Individually, each practice is a leader in  
18 its specific field, staffed with experts recognized for the depth of their knowledge and a  
19 track record of making an impact. FTI’s Power and Utilities practice provides a wide  
20 array of advisory services that address the strategic, financial, reputational and regulatory  
21 needs of energy and utility clients involved in the production and transmission of crude

1 oil, natural gas, refined products, chemicals, coal, electric power, emerging technologies,  
2 and renewable energy.

3 **Q. What are your responsibilities in your current position?**

4 A. As a member of the Power & Utilities practice, my responsibilities include providing  
5 advisory services that address the strategic, financial, reputational, and regulatory needs  
6 of energy and utility clients. My primary areas of focus are regulatory, accounting, civil  
7 litigation, and financial analysis.

8 **Q. Please describe your education.**

9 A. I have a Bachelor of Arts in Accounting from Indiana University of Pennsylvania in  
10 Indiana, Pennsylvania. A copy of my resume is included as Attachment KAS-1 to the  
11 joint testimony that I am co-sponsoring with Company witness David Simek in this  
12 proceeding on the topic of revenue requirement.

13 **Q. On whose behalf are you submitting testimony in this proceeding?**

14 A. I am testifying on behalf of Liberty Utilities (EnergyNorth Natural Gas) Corp.  
15 (“EnergyNorth” or “the Company”).

16 **II. SCOPE OF TESTIMONY**

17 **Q. What is the purpose of your testimony in this proceeding?**

18 A. The purpose of my testimony is to discuss the functional cost of service study performed  
19 by FTI and used as support for the rates proposed by EnergyNorth in this proceeding.

1 **Q. Are you sponsoring any exhibits to support your testimony?**

2 A. Yes, two attachments are provided with my testimony. Attachment KAS-2 is a summary  
3 of the functional cost of service study. Attachment KAS-3 provides the detailed study at  
4 the individual account level.

5 **III. FUNCTIONAL COST OF SERVICE STUDY**

6 **Q. What is a functional cost of service study and why was such a study performed for**  
7 **this case?**

8 A. A cost of service study provides a measure of the cost responsibility based on cost  
9 causation principles of a company's respective functions and various rate classes. A  
10 functional cost study is necessary to arrive at the cost responsibility for each of the  
11 functions because many of a company's costs are common, or indirect, and incurred to  
12 provide service to all customers. In general, costs are first identified based on the  
13 function for which they are incurred, then those costs are classified, typically as demand,  
14 customer, and commodity, and finally directly assigned or allocated to the various  
15 functions.

16 The functional cost of service study separates EnergyNorth's revenue requirement into  
17 four functions: delivery, direct gas cost, Liquefied Petroleum Gas ("LPG") and Liquefied  
18 Natural Gas ("LNG") costs, and miscellaneous indirect costs. The direct costs of  
19 purchasing gas, including LPG and LNG costs, as well as related indirect costs,  
20 collectively referred to as production costs, are recovered through the Cost of Gas

1 (“COG”) mechanism rather than through base distribution rates. The costs of delivering  
2 gas are recovered through base distribution rates.

3 Therefore, the purpose of a functional cost study is to ensure that there is neither  
4 duplication of cost recovery through both distribution rates and the COG mechanism nor  
5 stranded costs that are not recovered by either.

6 **Q. What is the relationship between this functional cost study and the marginal cost**  
7 **study that is being filed with this case?**

8 A. The marginal cost study provides the basis for determining the level of distribution  
9 revenues to be recovered from the various rate classes as well as the components that are  
10 used to design rates. In contrast, this functional cost study divides the Company’s total  
11 revenue requirement into the costs to be recovered through base rates and those that are  
12 recovered through the COG mechanism.

13 **Q. What is included in each of the categories of costs?**

14 A. Purchased gas costs include supplier, storage, and pipeline demand and commodity costs,  
15 as well as commodity costs for LPG and LNG, all of which are considered direct costs.  
16 Indirect gas costs include the LPG and LNG facility costs and expenses required to  
17 provide the supply service. The costs associated with supplying the gas commodity to  
18 customers that are not included in direct gas costs are indirect costs. Indirect costs  
19 consist of the bad debt expense related to the supply function, working capital related to  
20 the supply function, and other operations and maintenance expenses including gas



1 acquisition, dispatching, and administrative and general expenses related to the supply  
2 function but not included in direct gas costs.

3 **Q. How are costs allocated in the functional cost of service study?**

4 A. Cost are directly assigned to the greatest extent possible or allocated based on certain  
5 factors. Allocation factors can be developed using external factors or internal factors.  
6 External factors, such as the number of customers or sales and transportation revenues,  
7 are based on data from a separate independent analysis. An internal factor is calculated  
8 within the functional cost study based on the combination of previously allocated costs.

9 **Q. How are facilities costs treated in the functional study?**

10 A. The Company's LPG and LNG facilities provide a dual service, gas supply and pressure  
11 support for the distribution system. Company witness Matthew DeCoursey examined  
12 this dual functionality and determined that 8.7% of the Tilton LNG facility is required for  
13 the pressure support and the remaining 91.3% of the LPG and LNG is utilized for gas  
14 supply for the system. These percentages are used to allocate the LPG and LNG facilities  
15 costs between pressure support and supply service. All distribution facility costs, which  
16 are identified on page 1 of Attachment KAS-2, are directly assigned to delivery service.  
17 Intangible and general facility costs, which are set forth on page 1 of Attachment KAS-2,  
18 are allocated to the functions based on labor, an indirect allocation factor.

1 **Q. How are other rate base items treated in the functional study?**

2 A. Materials and supplies and accumulated deferred income taxes are allocated to the  
3 functions based on plant. Cash working capital is allocated on Operation and  
4 Maintenance (“O&M”) expenses, excluding gas costs and bad debt.

5 **Q. How are O&M expenses treated in the functional study?**

6 A. Production expenses related to gas acquisition are directly assigned to the supply function  
7 and the remaining expenses are allocated between supply and delivery services. All  
8 distribution, customer account, customer service, and sales expenses are directly assigned  
9 to delivery service. Uncollectible expense is allocated between delivery and production  
10 on a revenue basis.

11 **Q. How are Administrative and General expenses treated in the functional study?**

12 A. Administrative and General (“A&G”) expenses are allocated on labor except for  
13 transferred costs and regulatory commission expense. Regulatory commission expenses  
14 are allocated between delivery and production on a revenue basis, and the transferred  
15 costs are allocated based on all other A&G costs.

16 **Q. How are depreciation and taxes other than income expenses treated in the  
17 functional study?**

18 A. Depreciation expenses are directly assigned to the functions based on the specific plant  
19 accounts for each function. General and intangible depreciation expense follows  
20 intangible and general facility costs. Taxes other than income are allocated based on  
21 specific plant or specific labor factors.

1 **IV. RESULTS AND CONCLUSIONS**

2 **Q. Please describe the results of the functional study.**

3 A. Attachment KAS-2, page 1, presents a summary of the results of the functional study, at  
4 current rates, and shows the earned return for each function. Pages 2 and 3 present a  
5 more detailed summary of the production costs, separating the costs into LPG and LNG  
6 costs, miscellaneous production costs, and bad debt costs at current and proposed rates of  
7 return. The net result of the analysis is that a revenue requirement of \$2,009,237  
8 associated with the supply function should be recovered through the COG mechanism.  
9 Attachment KAS-3 provides a detailed view of the allocation of the revenue requirement  
10 by each account and the external and internal allocation factors used in the study.

11 **Q. Does this complete your testimony?**

12 A. Yes.

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**FUNCTIONAL COST STUDY  
SUMMARY OF RESULTS**

Line No.	Description	System Total	Delivery Costs	Direct Gas Costs	LPG & LNG	Misc	Production Costs
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
<b>Rate Base</b>							
1	Plant in Service	\$ 641,189,774	\$ 631,599,724	\$ -	\$ 9,590,051	\$ -	\$ 9,590,051
2	Accumulated Reserve	(204,751,433)	(200,951,293)	-	(3,800,140)	-	(3,800,140)
3	Other Rate Base Items	(80,026,614)	(79,043,506)	-	(1,002,362)	19,254	(983,108)
4	<b>Total Rate Base</b>	<b>\$ 356,411,727</b>	<b>\$ 351,604,925</b>	<b>\$ -</b>	<b>\$ 4,787,548</b>	<b>\$ 19,254</b>	<b>\$ 4,806,803</b>
<b>Revenues at Current Rates</b>							
5	Sales Revenue	\$ 84,591,458	\$ 84,591,458	\$ -	\$ -	\$ -	\$ -
6	Miscellaneous Revenues	1,197,776	1,197,340	-	371	65	436
7	<b>Total Revenues</b>	<b>\$ 85,789,234</b>	<b>\$ 85,788,798</b>	<b>\$ -</b>	<b>\$ 371</b>	<b>\$ 65</b>	<b>\$ 436</b>
<b>Expenses at Current Rates</b>							
8	Operations & Maintenance Expenses	\$ 27,964,575	\$ 27,462,472	\$ -	\$ 233,771	\$ 268,332	\$ 502,103
9	Depreciation Expense	22,911,910	22,219,362	-	662,435	30,113	692,548
10	Taxes Other Than Income Taxes	14,815,175	14,453,671	-	361,504	-	361,504
11	Interest on Customer Deposits	-	-	-	-	-	-
11	<b>Total Expenses - Current</b>	<b>\$ 65,691,661</b>	<b>\$ 64,135,506</b>	<b>\$ -</b>	<b>\$ 1,257,710</b>	<b>\$ 298,444</b>	<b>\$ 1,556,155</b>
12	Total Income Taxes	\$ 3,315,812	\$ 3,765,781	\$ -	\$ (369,053)	\$ (80,916)	\$ (449,969)
13	Current Operating Income	\$ 16,781,762	\$ 17,887,511	\$ -	\$ (888,286)	\$ (217,463)	\$ (1,105,749)
14	<b>Return at Current Rates</b>	<b>4.71%</b>	<b>5.09%</b>	<b>0.00%</b>	<b>-18.55%</b>	<b>-1129.43%</b>	<b>-23.00%</b>
15	<b>Index Rate of Return</b>	<b>1.00</b>	<b>1.08</b>	<b>-</b>	<b>(3.94)</b>	<b>(239.87)</b>	<b>(4.89)</b>
<b>Revenue Requirement at Equal Rates of Return</b>							
16	Required Return	7.47%	7.47%	7.47%	7.47%	7.47%	7.47%
17	Required Operating Income	\$ 26,623,956	\$ 26,264,888	\$ -	\$ 357,630	\$ 1,438	\$ 359,068
18	<b>Operating Income (Deficiency)/Surplus</b>	<b>\$ (9,842,195)</b>	<b>\$ (8,377,377)</b>	<b>\$ -</b>	<b>\$ (1,245,916)</b>	<b>\$ (218,902)</b>	<b>\$ (1,464,817)</b>
<b>Expenses at Required Return</b>							
19	Operations & Maintenance Expenses	\$ 27,964,575	\$ 27,462,472	\$ -	\$ 233,771	\$ 268,332	\$ 502,103
20	Depreciation Expense	22,911,910	22,219,362	-	662,435	30,113	692,548
21	Taxes Other than Income	14,815,175	14,453,671	-	361,504	-	361,504
22	Interest on Customer Deposits	-	-	-	-	-	-
23	<b>Total Expenses Required</b>	<b>\$ 65,691,661</b>	<b>\$ 64,135,506</b>	<b>\$ -</b>	<b>\$ 1,257,710</b>	<b>\$ 298,444</b>	<b>\$ 1,556,155</b>
24	Income Taxes	\$ 6,970,867	\$ 6,876,853	\$ -	\$ 93,637	\$ 377	\$ 94,014
25	<b>Total Revenue Requirement at Equal Return</b>	<b>\$ 99,286,484</b>	<b>\$ 97,277,247</b>	<b>\$ -</b>	<b>\$ 1,708,977</b>	<b>\$ 300,259</b>	<b>\$ 2,009,237</b>
26	<b>Revenue (Deficiency)/Surplus</b>	<b>\$ (13,497,250)</b>	<b>\$ (11,488,449)</b>	<b>\$ -</b>	<b>\$ (1,708,606)</b>	<b>\$ (300,194)</b>	<b>\$ (2,008,800)</b>

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**Functional Cost Study  
Account Detail**

Line No.	Description	LPG & LNG Costs	Misc. Production Costs	Bad Debts Excl. LPG & LNG	Gas Cost Working Capital	Total Indirect Costs
	(A)	(B)	(C)	(D)	(E)	(F)
Summary of Results at Present Rates						
Rate Base						
1	Gas Plant in Service	\$ 9,590,051	\$ -	\$ -	\$ -	\$ 9,590,051
2	Accumulated Reserve	(3,800,140)	-	-	-	(3,800,140)
3	Net Utility Plant in Service	\$ 5,789,911	\$ -	\$ -	\$ -	\$ 5,789,911
Other Rate Base Items:						
4	Fuel Stock	\$ -	\$ -	\$ -	\$ -	\$ -
5	Materials and Supplies	77,309.14	\$ -	\$ -	\$ -	77,309.14
6	Gas Stored Underground	-	-	-	-	-
7	LNG Inventory	-	-	-	-	-
8	Cash Working Capital	39,679	19,254	-	-	58,933
9	Accumulated Deferred Income Taxes	(762,973)	-	-	-	(762,973)
10	Excess Accum. Deferred Income Taxes	(356,377)	-	-	-	(356,377)
11	Total Rate Base	\$ 4,787,548	\$ 19,254	\$ -	\$ -	\$ 4,806,803
Revenues						
12	Total Sales Revenue	\$ -	\$ -	\$ -	\$ -	\$ -
13	Other Operating Revenues	371	65	-	-	436
14	Total Operating Revenues	\$ 371	\$ 65	\$ -	\$ -	\$ 436
Expenses						
15	Purchased Gas Costs	\$ -	\$ -	\$ -	\$ -	\$ -
16	Other O&M excl. Uncollectible	204,841	263,249	-	-	468,090
17	Uncollectible Expense	28,930	-	5,083	-	34,013
18	Depreciation Expense	662,435	30,113	-	-	692,548
19	Other Taxes	361,504	-	-	-	361,504
20	Income Taxes	(369,053)	(79,539)	(1,377)	-	(449,969)
21	Total Operating Expenses	\$ 888,657	\$ 213,822	\$ 3,706	\$ -	\$ 1,106,185
22	Operating Income	\$ (888,286)	\$ (213,757)	\$ (3,706)	\$ -	\$ (1,105,749)
23	Rate of Return	-18.55%	-1110.18%	0.00%	0.00%	-23.00%
24	Index Rate of Return	1.00	59.83	-	-	1.24
25	Net Revenues	\$ -	\$ -	\$ -	\$ -	\$ -

**Functional Cost Study  
Account Detail**

Line No.	Description (A)	LPG & LNG Costs (B)	Misc. Production Costs (C)	Bad Debts Excl. LPG & LNG (D)	Gas Cost Working Capital (E)	Total Indirect Costs (F)
Summary of Results at Claimed Rates						
Rate Base						
26	Gas Plant in Service	\$ 9,590,051	\$ -	\$ -	\$ -	\$ 9,590,051
27	Accumulated Reserve	(3,800,140)	-	-	-	(3,800,140)
28	Net Utility Plant in Service	\$ 5,789,911	\$ -	\$ -	\$ -	\$ 5,789,911
Other Rate Base Items:						
29	Fuel Stock	\$ -	\$ -	\$ -	\$ -	\$ -
	Materials and Supplies	77,309	-	-	-	77,309
	Gas Stored Underground	-	-	-	-	-
	LNG Inventory	-	-	-	-	-
30	Cash Working Capital	39,679	19,254	-	-	58,933
31	Accumulated Deferred Income Taxes	(762,973)	-	-	-	(762,973)
8	Excess Accum. Deferred Income Taxes	(356,377)	-	-	-	(356,377)
9	Total Rate Base	\$ 4,787,548	\$ 19,254	\$ -	\$ -	\$ 4,806,803
Required Rate of Return						
10	Required Operating Income	7.47%	7.47%	7.47%	7.47%	7.47%
		\$ 357,630	\$ 1,438	\$ -	\$ -	\$ 359,068
Expenses						
11	Purchased Gas Costs	\$ -	\$ -	\$ -	\$ -	\$ -
12	Other O&M excl. Uncollectible	204,841	263,249	-	-	468,090
13	Uncollectible Expense	28,930	-	5,083	-	34,013
14	Depreciation Expense	662,435	30,113	-	-	692,548
15	Other Taxes	361,504	-	-	-	361,504
17	Total Expenses Required	\$ 1,257,710	\$ 293,361	\$ 5,083	\$ -	\$ 1,556,155
18	Income Taxes	93,637	377	(0)	-	94,014
19	Total Rev. Req. at Required Return	\$ 1,708,977	\$ 295,177	\$ 5,083	\$ -	\$ 2,009,237
Revenues						
	Total Sales Revenue	\$ 1,708,606	\$ 295,111	\$ 5,083	\$ -	\$ 2,008,800
	Other Operating Revenues	371	65	-	-	436
	Total Operating Revenues	\$ 1,708,977	\$ 295,177	\$ 5,083	\$ -	\$ 2,009,237

Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	Delivery Costs				Direct Gas Costs			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
<b>RATE BASE</b>										
<b>Plant in Service</b>										
<b>Intangible Plant</b>										
Misc. Intangible Plant	17,059,198	LABOR	8,865,576	6,749,995	-	15,615,571	-	-	-	-
<b>Sub-total</b>	<b>17,310,148</b>		<b>8,995,994</b>	<b>6,849,291</b>	-	<b>15,845,285</b>	-	-	-	-
<b>Production Plant</b>										
Production Plant EN	5,216,322	DPROD	453,820	-	-	453,820	-	-	-	-
Production Plant Keene	-	DPROD_K	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>5,216,322</b>		<b>453,820</b>	-	-	<b>453,820</b>	-	-	-	-
<b>Distribution Plant</b>										
Land & Land Rights	-	DIST	-	-	-	-	-	-	-	-
M&R Stations	-	DIST	-	-	-	-	-	-	-	-
Mains	11,740,462	DIST	11,740,462	-	-	11,740,462	-	-	-	-
Compressor Station Equipment	2,246,186	DIST	2,246,186	-	-	2,246,186	-	-	-	-
M&R Stations	7,435,290	DIST	7,435,290	-	-	7,435,290	-	-	-	-
Services	178,923,785	CLUST	-	178,923,785	-	178,923,785	-	-	-	-
Meters & Meter Installations	21,117,103	CLUST	-	21,117,103	-	21,117,103	-	-	-	-
Other Equipment	2,677,770	DIST	2,677,770	-	-	2,677,770	-	-	-	-
<b>Sub-total</b>	<b>578,926,765</b>		<b>352,824,153</b>	<b>226,102,612</b>	-	<b>578,926,765</b>	-	-	-	-
<b>General Plant</b>										
Land & Land Rights	121,489	LABOR	63,137	48,071	-	111,208	-	-	-	-
Structures & Improvements	22,653,117	LABOR	11,772,707	8,963,400	-	20,736,107	-	-	-	-
Office Furniture & Equipment	2,403,092	LABOR	1,248,875	950,857	-	2,199,732	-	-	-	-
Transportation Equipment	8,007,116	LABOR	4,161,256	3,168,261	-	7,329,517	-	-	-	-
Stores Equipment	138,142	LABOR	71,792	54,660	-	126,452	-	-	-	-
Tools, Shop & Garage Equip.	3,339,457	LABOR	1,735,499	1,321,359	-	3,056,857	-	-	-	-
Laboratory Equip.	-	LABOR	-	-	-	-	-	-	-	-
Power Operated Equip.	1,378,752	LABOR	716,530	545,545	-	1,262,075	-	-	-	-
Communication Equip.	892,402	LABOR	463,777	353,106	-	816,883	-	-	-	-
Miscellaneous Equip.	802,973	LABOR	417,301	317,721	-	735,022	-	-	-	-
<b>Sub-total</b>	<b>39,736,540</b>		<b>20,650,874</b>	<b>15,722,980</b>	-	<b>36,373,854</b>	-	-	-	-
<b>TOTAL PLANT-IN-SERVICE</b>	<b>641,189,774</b>		<b>382,924,840</b>	<b>248,674,883</b>	-	<b>631,599,724</b>	-	-	-	-
<b>Accumulated Reserve for Depreciation</b>										
<b>Intangible Plant</b>										
Misc. Intangible Plant	(13,560,761)	LABOR	(7,047,457)	(5,365,731)	-	(12,413,188)	-	-	-	-
<b>Sub-total</b>	<b>(13,560,761)</b>		<b>(7,047,457)</b>	<b>(5,365,731)</b>	-	<b>(12,413,188)</b>	-	-	-	-
<b>Production Plant</b>										
Production Plant	(1,837,129)	DPROD	(159,830)	-	-	(159,830)	-	-	-	-
Production Plant Keene	-	DPROD_K	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>(1,837,129)</b>		<b>(159,830)</b>	-	-	<b>(159,830)</b>	-	-	-	-
<b>Distribution Plant</b>										
Land & Land Rights	-	DIST	-	-	-	-	-	-	-	-
M&R Stations	83,294	DIST	83,294	-	-	83,294	-	-	-	-
Mains	(404,274)	DIST	(404,274)	-	-	(404,274)	-	-	-	-
Compressor Station Equipment	(192,723)	DIST	(192,723)	-	-	(192,723)	-	-	-	-
M&R Stations	(4,358,391)	DIST	(4,358,391)	-	-	(4,358,391)	-	-	-	-
Services	(85,611,484)	DIST	(85,611,484)	-	-	(85,611,484)	-	-	-	-
Meters & Meter Installations	(7,401,085)	DIST	(7,401,085)	-	-	(7,401,085)	-	-	-	-
Meters Installations	(4,122,684)	CLUST	-	(4,122,684)	-	(4,122,684)	-	-	-	-
Land & Land Rights	-	CLUST	-	-	-	-	-	-	-	-
Structures and Improvements	(460,293)	CLUST	-	(460,293)	-	(460,293)	-	-	-	-
Other Equipment	(2,400,155)	DIST	(2,400,155)	-	-	(2,400,155)	-	-	-	-
Other Equipment	(1,078,797)	DIST	(1,078,797)	-	-	(1,078,797)	-	-	-	-

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Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	LPG & LNG				Misc			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
<b>RATE BASE</b>										
<b>Plant in Service</b>										
<b>Intangible Plant</b>										
Misc. Intangible Plant	17,059,198	LABOR	1,443,627	-	-	1,443,627	-	-	-	-
<b>Sub-total</b>	<b>17,310,148</b>		<b>1,464,863</b>	-	-	<b>1,464,863</b>	-	-	-	-
<b>Production Plant</b>										
Production Plant EN	5,216,322	DPROD	4,762,502	-	-	4,762,502	-	-	-	-
Production Plant Keene	-	DPROD_K	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>5,216,322</b>		<b>4,762,502</b>	-	-	<b>4,762,502</b>	-	-	-	-
<b>Distribution Plant</b>										
Land & Land Rights	-	DIST	-	-	-	-	-	-	-	-
M&R Stations	-	DIST	-	-	-	-	-	-	-	-
Mains	11,740,462	DIST	-	-	-	-	-	-	-	-
Compressor Station Equipment	2,246,186	DIST	-	-	-	-	-	-	-	-
M&R Stations	7,435,290	DIST	-	-	-	-	-	-	-	-
Services	178,923,785	CUST	-	-	-	-	-	-	-	-
Meters & Meter Installations	21,117,103	CUST	-	-	-	-	-	-	-	-
Other Equipment	2,677,770	DIST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>578,926,765</b>		-	-	-	-	-	-	-	-
<b>General Plant</b>										
Land & Land Rights	121,489	LABOR	10,281	-	-	10,281	-	-	-	-
Structures & Improvements	22,653,117	LABOR	1,917,009	-	-	1,917,009	-	-	-	-
Office Furniture & Equipment	2,403,092	LABOR	203,361	-	-	203,361	-	-	-	-
Transportation Equipment	8,007,116	LABOR	677,598	-	-	677,598	-	-	-	-
Stores Equipment	138,142	LABOR	11,690	-	-	11,690	-	-	-	-
Tools, Shop & Garage Equip.	3,339,457	LABOR	282,600	-	-	282,600	-	-	-	-
Laboratory Equip.	-	LABOR	-	-	-	-	-	-	-	-
Power Operated Equip.	1,378,752	LABOR	116,676	-	-	116,676	-	-	-	-
Communication Equip.	892,402	LABOR	75,519	-	-	75,519	-	-	-	-
Miscellaneous Equip.	802,973	LABOR	67,951	-	-	67,951	-	-	-	-
<b>Sub-total</b>	<b>39,736,540</b>		<b>3,362,686</b>	-	-	<b>3,362,686</b>	-	-	-	-
<b>TOTAL PLANT-IN-SERVICE</b>	<b>641,189,774</b>		<b>9,590,051</b>	-	-	<b>9,590,051</b>	-	-	-	-
<b>Accumulated Reserve for Depreciation</b>										
<b>Intangible Plant</b>										
Misc. Intangible Plant	(13,560,761)	LABOR	(1,147,573)	-	-	(1,147,573)	-	-	-	-
<b>Sub-total</b>	<b>(13,560,761)</b>		<b>(1,147,573)</b>	-	-	<b>(1,147,573)</b>	-	-	-	-
<b>Production Plant</b>										
Production Plant	(1,837,129)	DPROD	(1,677,299)	-	-	(1,677,299)	-	-	-	-
Production Plant Keene	-	DPROD_K	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>(1,837,129)</b>		<b>(1,677,299)</b>	-	-	<b>(1,677,299)</b>	-	-	-	-
<b>Distribution Plant</b>										
Land & Land Rights	-	DIST	-	-	-	-	-	-	-	-
M&R Stations	83,294	DIST	-	-	-	-	-	-	-	-
Mains	(404,274)	DIST	-	-	-	-	-	-	-	-
Compressor Station Equipment	(192,723)	DIST	-	-	-	-	-	-	-	-
M&R Stations	(4,358,391)	DIST	-	-	-	-	-	-	-	-
Services	(83,611,484)	DIST	-	-	-	-	-	-	-	-
Meters & Meter Installations	(7,401,085)	DIST	-	-	-	-	-	-	-	-
Meters Installations	(4,122,684)	CUST	-	-	-	-	-	-	-	-
Land & Land Rights	-	CUST	-	-	-	-	-	-	-	-
Structures and Improvements	(460,293)	CUST	-	-	-	-	-	-	-	-
Other Equipment	(2,400,155)	DIST	-	-	-	-	-	-	-	-
Other Equipment	(1,078,797)	DIST	-	-	-	-	-	-	-	-

Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	Delivery Costs				Direct Gas Costs			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
Measuring and Regulating Station Equipment	18,159	DIST	18,159	-	-	18,159	-	-	-	-
Dist-Measuring and regulating station equipment-Ci	(1,321,095)	DIST	(1,321,095)	-	-	(1,321,095)	-	-	-	-
Indust meas and reg station equip	(4,103)	DIST	(4,103)	-	-	(4,103)	-	-	-	-
Structures and Improvements	(213,309)	DIST	(213,309)	-	-	(213,309)	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
Sub-total	(177,828,890)		(173,245,912)	(4,582,977)	-	(177,828,890)	-	-	-	-

Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	LPG & LNG				Misc			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
Measuring and Regulating Station Equipment	18,159	DIST	-	-	-	-	-	-	-	-
Dist-Measuring and regulating station equipment-Ci	(1,321,095)	DIST	-	-	-	-	-	-	-	-
Indust meas and reg station equip	(4,103)	DIST	-	-	-	-	-	-	-	-
Structures and Improvements	(213,309)	DIST	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
~	~	~	-	-	-	-	-	-	-	-
Sub-total	(177,828,890)		-	-	-	-	-	-	-	-





Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	Delivery Costs				Direct Gas Costs			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
<b>EXPENSES</b>										
<b>O &amp; M Expenses</b>										
<b>Production (LPG LNG) - Operation</b>										
Supervision	997,056	DPROD	86,744	-	-	86,744	-	-	-	-
LPG - Production	-	DPROD	-	-	-	-	-	-	-	-
LPG - Materials	-	DPROD	-	-	-	-	-	-	-	-
Gas Mixing & Misc Exp - Keene	70,719	DPROD	6,153	-	-	6,153	-	-	-	-
Misc. Prod. Exp.	470,400	DPROD	40,925	-	-	40,925	-	-	-	-
Operation Labor & Expenses	-	DPROD	-	-	-	-	-	-	-	-
Other	26,122	DPROD	2,273	-	-	2,273	-	-	-	-
Indirect Expenses	(1,993,587)	INDIRECT	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>(429,290)</b>		<b>136,094</b>	-	-	<b>136,094</b>	-	-	-	-
<b>Production (LPG LNG) - Maintenance</b>										
Maint. of Prod. Equip	119,531	DPROD	10,399	-	-	10,399	-	-	-	-
<b>Sub-total</b>	<b>119,531</b>		<b>10,399</b>	-	-	<b>10,399</b>	-	-	-	-
<b>Total Production</b>	<b>(309,759)</b>		<b>146,493</b>	-	-	<b>146,493</b>	-	-	-	-
<b>Purchased Gas Expenses</b>										
Gas Supply	-	GASCOST	-	-	-	-	-	-	-	-
Storage Gas	-	GASCOST	-	-	-	-	-	-	-	-
Other Gas Supply	-	GASSPLY	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>-</b>		<b>-</b>	-	-	<b>-</b>	-	-	-	-
<b>Distribution Operation Expenses</b>										
Operation Supervision & Engineering	543,453	DISTOPX	444,827	98,626	-	543,453	-	-	-	-
Distribution Load Dispatch	587,944	DIST	587,944	-	-	587,944	-	-	-	-
Mains & Services Expenses	5,708,819	DIST	5,708,819	-	-	5,708,819	-	-	-	-
M&R Station Expenses - General	-	DIST	-	-	-	-	-	-	-	-
M&R Station Expenses - Industrial	-	DIST	-	-	-	-	-	-	-	-
Meter & House Regulator Expenses	1,140,737	CUST	-	1,140,737	-	1,140,737	-	-	-	-
Customer Installation Expenses	642,746	CUST	-	642,746	-	642,746	-	-	-	-
Other Expenses	1,736,570	DIST	1,736,570	-	-	1,736,570	-	-	-	-
Rents	10,618	DIST	10,618	-	-	10,618	-	-	-	-
<b>Sub-total</b>	<b>10,370,887</b>		<b>8,488,778</b>	<b>1,882,109</b>	-	<b>10,370,887</b>	-	-	-	-
<b>Distribution Maintenance Expenses</b>										
Maint. Supervision & Engineering	-	DISTMNX	-	-	-	-	-	-	-	-
Maint. of Structures & Improv.	150,147	DIST	150,147	-	-	150,147	-	-	-	-
Maint. of Mains	2,677,943	DIST	2,677,943	-	-	2,677,943	-	-	-	-
Maint. of M&R Station Equip. - General	-	DIST	-	-	-	-	-	-	-	-
Maint. of Services	466,805	CUST	-	466,805	-	466,805	-	-	-	-
Maint. of Meters & House Regulators	356,709	CUST	-	356,709	-	356,709	-	-	-	-
Maint. of Other Equip.	347,300	DIST	347,300	-	-	347,300	-	-	-	-
<b>Sub-total</b>	<b>3,998,904</b>		<b>3,175,390</b>	<b>823,514</b>	-	<b>3,998,904</b>	-	-	-	-
<b>Total Distribution</b>	<b>14,369,791</b>		<b>11,664,168</b>	<b>2,705,623</b>	-	<b>14,369,791</b>	-	-	-	-

Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	LPG & LNG				Misc			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
<b>EXPENSES</b>										
<b>O &amp; M Expenses</b>										
<b>Production (LPG LNG) - Operation</b>										
Supervision	997,056	DPROD	910,312	-	-	910,312	-	-	-	-
LPG - Production	-	DPROD	-	-	-	-	-	-	-	-
LPG - Materials	-	DPROD	-	-	-	-	-	-	-	-
Gas Mixing & Misc Exp - Keene	70,719	DPROD	64,567	-	-	64,567	-	-	-	-
Misc. Prod. Exp.	470,400	DPROD	429,476	-	-	429,476	-	-	-	-
Operation Labor & Expenses	-	DPROD	-	-	-	-	-	-	-	-
Other	26,122	DPROD	23,849	-	-	23,849	-	-	-	-
Indirect Expenses	(1,993,587)	INDIRECT	-	-	(1,980,417)	(1,980,417)	-	-	(13,170)	(13,170)
<b>Sub-total</b>	<b>(429,290)</b>		<b>1,428,204</b>	-	<b>(1,980,417)</b>	<b>(552,214)</b>	-	-	<b>(13,170)</b>	<b>(13,170)</b>
<b>Production (LPG LNG) - Maintenance</b>										
Maint. of Prod. Equip	119,531	DPROD	109,132	-	-	109,132	-	-	-	-
<b>Sub-total</b>	<b>119,531</b>		<b>109,132</b>	-	-	<b>109,132</b>	-	-	-	-
<b>Total Production</b>	<b>(309,759)</b>		<b>1,537,335</b>	-	<b>(1,980,417)</b>	<b>(443,082)</b>	-	-	<b>(13,170)</b>	<b>(13,170)</b>
<b>Purchased Gas Expenses</b>										
Gas Supply	-	GASCOST	-	-	-	-	-	-	-	-
Storage Gas	-	GASCOST	-	-	-	-	-	-	-	-
Other Gas Supply	-	GASSPLY	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>-</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Distribution Operation Expenses</b>										
Operation Supervision & Engineering	543,453	DISTOPX	-	-	-	-	-	-	-	-
Distribution Load Dispatch	587,944	DIST	-	-	-	-	-	-	-	-
Mains & Services Expenses	5,708,819	DIST	-	-	-	-	-	-	-	-
M&R Station Expenses - General	-	DIST	-	-	-	-	-	-	-	-
M&R Station Expenses - Industrial	-	DIST	-	-	-	-	-	-	-	-
Meter & House Regulator Expenses	1,140,737	CUST	-	-	-	-	-	-	-	-
Customer Installation Expenses	642,746	CUST	-	-	-	-	-	-	-	-
Other Expenses	1,736,570	DIST	-	-	-	-	-	-	-	-
Rents	10,618	DIST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>10,370,887</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Distribution Maintenance Expenses</b>										
Maint. Supervision & Engineering	-	DISTMNX	-	-	-	-	-	-	-	-
Maint. of Structures & Improv.	150,147	DIST	-	-	-	-	-	-	-	-
Maint. of Mains	2,677,943	DIST	-	-	-	-	-	-	-	-
Maint. of M&R Station Equip. - General	-	DIST	-	-	-	-	-	-	-	-
Maint. of Services	466,805	CUST	-	-	-	-	-	-	-	-
Maint. of Meters & House Regulators	356,709	CUST	-	-	-	-	-	-	-	-
Maint. of Other Equip.	347,300	DIST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>3,998,904</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Distribution</b>	<b>14,369,791</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	Delivery Costs				Direct Gas Costs				
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL	
<b>Customer Account</b>											
Supervision	248,451	CACCTX	-	248,451	-	248,451	-	-	-	-	-
Meter Reading	329,798	CUST	-	329,798	-	329,798	-	-	-	-	-
Customer Records & Collection	2,768,744	CUST	-	2,768,744	-	2,768,744	-	-	-	-	-
Uncollectable Accounts - Delivery	1,646,757	PREV_DEL	-	-	1,646,757	1,646,757	-	-	-	-	-
Uncollectable Accounts - Production	34,013	PREV_PROD	-	-	-	-	-	-	-	-	-
Misc. Customer Accounts	13,047	CUST	-	13,047	-	13,047	-	-	-	-	-
<b>Sub-total</b>	<b>5,040,811</b>		-	<b>3,360,041</b>	<b>1,646,757</b>	<b>5,006,798</b>	-	-	-	-	-
<b>Customer Service &amp; Information Expenses</b>											
Informational and Instructional Advertisign Expenses	96,318	CUST	-	96,318	-	96,318	-	-	-	-	-
Misc Customer Assistance Expense	15,180	CUST	-	15,180	-	15,180	-	-	-	-	-
<b>Sub-total</b>	<b>111,497</b>		-	<b>111,497</b>	-	<b>111,497</b>	-	-	-	-	-
<b>Sales Expenses</b>											
Demonstrating & Selling Expenses	458,691	CUST	-	458,691	-	458,691	-	-	-	-	-
Advertising Expenses	26,484	CUST	-	26,484	-	26,484	-	-	-	-	-
Misc. Sales Expenses	77,946	CUST	-	77,946	-	77,946	-	-	-	-	-
<b>Sub-total</b>	<b>563,121</b>		-	<b>563,121</b>	-	<b>563,121</b>	-	-	-	-	-
<b>Administrative and General Expenses</b>											
Administrative & General Salaries	5,450,219	LABOR	2,832,451	2,156,546	-	4,988,997	-	-	-	-	-
A&G Salaries - Energy Procurement	421,021	GASSPLY	-	-	-	-	-	-	-	-	-
Office Supplies	2,035,906	LABOR	1,058,050	805,569	-	1,863,618	-	-	-	-	-
Office Supplies - Energy Procurement	168,393	GASSPLY	-	-	-	-	-	-	-	-	-
A&G Transferred	(16,140,423)	AGXTRANSFER	(7,842,482)	(5,971,040)	(505,061)	(14,318,582)	-	-	-	-	-
A&G Transferred - Energy Procurement	-	GASSPLY	-	-	-	-	-	-	-	-	-
Outside Services	7,002,280	LABOR	3,639,048	2,770,667	-	6,409,715	-	-	-	-	-
Outside Serv. - Gas Acquisition	216,091	GASSPLY	-	-	-	-	-	-	-	-	-
Property Insurance	51,523	LABOR	26,776	20,387	-	47,163	-	-	-	-	-
Injuries & Damages	814,179	LABOR	423,125	322,155	-	745,280	-	-	-	-	-
Employee Pension & Benefits	7,260,431	LABOR	3,773,208	2,872,812	-	6,646,020	-	-	-	-	-
Regulatory Commission - Delivery	761,312	PREV_DEL	-	-	761,312	761,312	-	-	-	-	-
Regulatory Commission - Production	15,725	REG_COMM	-	-	-	-	-	-	-	-	-
Misc. General Expenses	1,146	LABOR	595	453	-	1,049	-	-	-	-	-
Office Rent	131,314	LABOR	68,243	51,958	-	120,202	-	-	-	-	-
Maintenance of General Plant	-	LABOR	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>8,189,114</b>		<b>3,979,014</b>	<b>3,029,507</b>	<b>256,251</b>	<b>7,264,772</b>	-	-	-	-	-
<b>TOTAL O &amp; M EXPENSES</b>	<b>27,964,575</b>		<b>15,789,676</b>	<b>9,769,789</b>	<b>1,903,008</b>	<b>27,462,472</b>	-	-	-	-	-
<b>Labor Expense</b>											
<b>Production - Operation</b>											
Supervision	965,037	DPROD	83,958	-	-	83,958	-	-	-	-	-
LPG - Production	-	DPROD	-	-	-	-	-	-	-	-	-
LPG - Materials	-	DPROD	-	-	-	-	-	-	-	-	-
Gas Mixing & Misc Exp - Keene	189,712	DPROD	16,505	-	-	16,505	-	-	-	-	-
Misc. Prod. Exp.	-	DPROD	-	-	-	-	-	-	-	-	-
Operation Labor & Expenses	-	DPROD	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>1,155,018</b>		<b>100,487</b>	-	-	<b>100,487</b>	-	-	-	-	-
<b>Production - Maintenance</b>											
Maint. of Prod. Equip	-	DPROD	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	-		-	-	-	-	-	-	-	-	-
<b>Total Production</b>	<b>1,155,018</b>		<b>100,487</b>	-	-	<b>100,487</b>	-	-	-	-	-



Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	LPG & LNG				Misc			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
<b>Customer Account</b>										
Supervision	248,451	CACCTX	-	-	-	-	-	-	-	-
Meter Reading	329,798	CUST	-	-	-	-	-	-	-	-
Customer Records & Collection	2,768,744	CUST	-	-	-	-	-	-	-	-
Uncollectable Accounts - Delivery	1,646,757	PREV_DEL	-	-	-	-	-	-	-	-
Uncollectable Accounts - Production	34,013	PREV_PROD	-	-	28,930	28,930	-	-	5,083	5,083
Misc. Customer Accounts	13,047	CUST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>5,040,811</b>		-	-	<b>28,930</b>	<b>28,930</b>	-	-	<b>5,083</b>	<b>5,083</b>
<b>Customer Service &amp; Information Expenses</b>										
Informational and Instructional Advertisign Expenses	96,318	CUST	-	-	-	-	-	-	-	-
Misc Customer Assistance Expense	15,180	CUST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>111,497</b>		-	-	-	-	-	-	-	-
<b>Sales Expenses</b>										
Demonstrating & Selling Expenses	458,691	CUST	-	-	-	-	-	-	-	-
Advertising Expenses	26,484	CUST	-	-	-	-	-	-	-	-
Misc. Sales Expenses	77,946	CUST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>563,121</b>		-	-	-	-	-	-	-	-
<b>Administrative and General Expenses</b>										
Administrative & General Salaries	5,450,219	LABOR	461,222	-	-	461,222	-	-	-	-
A&G Salaries - Energy Procurement	421,021	GASSPLY	-	-	-	-	-	-	421,021	421,021
Office Supplies	2,035,906	LABOR	172,288	-	-	172,288	-	-	-	-
Office Supplies - Energy Procurement	168,393	GASSPLY	-	-	-	-	-	-	168,393	168,393
A&G Transferred	(16,140,423)	AGXTRANSFER	(1,277,031)	-	-	(1,277,031)	-	-	(544,810)	(544,810)
A&G Transferred - Energy Procurement	-	GASSPLY	-	-	-	-	-	-	-	-
Outside Services	7,002,280	LABOR	592,565	-	-	592,565	-	-	-	-
Outside Serv. - Gas Acquisition	216,091	GASSPLY	-	-	-	-	-	-	216,091	216,091
Property Insurance	51,523	LABOR	4,360	-	-	4,360	-	-	-	-
Injuries & Damages	814,179	LABOR	68,900	-	-	68,900	-	-	-	-
Employee Pension & Benefits	7,260,431	LABOR	614,411	-	-	614,411	-	-	-	-
Regulatory Commission - Delivery	761,312	PREV_DEL	-	-	-	-	-	-	-	-
Regulatory Commission - Production	15,725	REG_COMM	-	-	-	-	-	-	15,725	15,725
Misc. General Expenses	1,146	LABOR	97	-	-	97	-	-	-	-
Office Rent	131,314	LABOR	11,112	-	-	11,112	-	-	-	-
Maintenance of General Plant	-	LABOR	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>8,189,114</b>		<b>647,923</b>	-	-	<b>647,923</b>	-	-	<b>276,419</b>	<b>276,419</b>
<b>TOTAL O &amp; M EXPENSES</b>	<b>27,964,575</b>		<b>2,185,258</b>	-	<b>(1,951,487)</b>	<b>233,771</b>	-	-	<b>268,332</b>	<b>268,332</b>
<b>Labor Expense</b>										
<b>Production - Operation</b>										
Supervision	965,037	DPROD	881,079	-	-	881,079	-	-	-	-
LPG - Production	-	DPROD	-	-	-	-	-	-	-	-
LPG - Materials	-	DPROD	-	-	-	-	-	-	-	-
Gas Mixing & Misc Exp - Keene	189,712	DPROD	173,207	-	-	173,207	-	-	-	-
Misc. Prod. Exp.	-	DPROD	-	-	-	-	-	-	-	-
Operation Labor & Expenses	-	DPROD	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>1,155,018</b>		<b>1,054,531</b>	-	-	<b>1,054,531</b>	-	-	-	-
<b>Production - Maintenance</b>										
Maint. of Prod. Equip	-	DPROD	-	-	-	-	-	-	-	-
<b>Sub-total</b>	-		-	-	-	-	-	-	-	-
<b>Total Production</b>	<b>1,155,018</b>		<b>1,054,531</b>	-	-	<b>1,054,531</b>	-	-	-	-

Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	Delivery Costs				Direct Gas Costs			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
<b>Distribution Operation Expenses</b>										
Operation Supervision & Engineering	338,512	DISTOPX	277,079	61,433	-	338,512	-	-	-	-
Distribution Load Dispatch	587,482	DIST	587,482	-	-	587,482	-	-	-	-
Mains & Services Expenses	3,573,456	DIST	3,573,456	-	-	3,573,456	-	-	-	-
M&R Station Expenses - General	-	DIST	-	-	-	-	-	-	-	-
M&R Station Expenses - Industrial	-	DIST	-	-	-	-	-	-	-	-
Meter & House Regulator Expenses	1,061,406	CUST	-	1,061,406	-	1,061,406	-	-	-	-
Customer Installation Expenses	636,680	CUST	-	636,680	-	636,680	-	-	-	-
Other Expenses	882,651	DIST	882,651	-	-	882,651	-	-	-	-
Rents	-	DIST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>7,080,188</b>		<b>5,320,668</b>	<b>1,759,519</b>	-	<b>7,080,188</b>	-	-	-	-
<b>Distribution Maintenance Expenses</b>										
Maint. Supervision & Engineering	-	DISTMNX	-	-	-	-	-	-	-	-
Maint. of Structures & Improv.	122,643	DIST	122,643	-	-	122,643	-	-	-	-
Maint. of Mains	833,130	DIST	833,130	-	-	833,130	-	-	-	-
Maint. of M&R Station Equip. - General	-	DIST	-	-	-	-	-	-	-	-
Maint. of Services	210,518	CUST	-	210,518	-	210,518	-	-	-	-
Maint. of Meters & House Regulators	269,244	CUST	-	269,244	-	269,244	-	-	-	-
Maint. of Other Equip.	99,144	DIST	99,144	-	-	99,144	-	-	-	-
<b>Sub-total</b>	<b>1,534,678</b>		<b>1,054,917</b>	<b>479,761</b>	-	<b>1,534,678</b>	-	-	-	-
<b>Total Distribution</b>	<b>8,614,866</b>		<b>6,375,585</b>	<b>2,239,280</b>	-	<b>8,614,866</b>	-	-	-	-
<b>Customer Account</b>										
Supervision	248,451	CACCTX	-	248,451	-	248,451	-	-	-	-
Meter Reading	304,150	CUST	-	304,150	-	304,150	-	-	-	-
Customer Records & Collection	1,611,586	CUST	-	1,611,586	-	1,611,586	-	-	-	-
Uncollectable Accounts	-		-	-	-	-	-	-	-	-
Misc. Customer Accounts	-	CUST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>2,164,187</b>		-	<b>2,164,187</b>	-	<b>2,164,187</b>	-	-	-	-
<b>Customer Service &amp; Information Expenses</b>										
Informational and Instructional Advertising Expenses	21,871	CUST	-	21,871	-	21,871	-	-	-	-
Misc Customer Assistance Expense	-	CUST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>21,871</b>		-	<b>21,871</b>	-	<b>21,871</b>	-	-	-	-
<b>Sales Expenses</b>										
Demonstrating & Selling Expenses	427,410	CUST	-	427,410	-	427,410	-	-	-	-
Advertising Expenses	-		-	-	-	-	-	-	-	-
Misc. Sales Expenses	77,946	CUST	-	77,946	-	77,946	-	-	-	-
<b>Sub-total</b>	<b>505,356</b>		-	<b>505,356</b>	-	<b>505,356</b>	-	-	-	-
<b>TOTAL O &amp; M LABOR EXP.</b>	<b>12,461,298</b>		<b>6,476,072</b>	<b>4,930,695</b>	-	<b>11,406,766</b>	-	-	-	-

Functional Cost Study  
Account Detail

Account Description	Amount	Alloc. Factor	LPG & LNG				Misc			
			DEM	CUS	COM	TOTAL	DEM	CUS	COM	TOTAL
<b>Distribution Operation Expenses</b>										
Operation Supervision & Engineering	338,512	DISTOPX	-	-	-	-	-	-	-	-
Distribution Load Dispatch	587,482	DIST	-	-	-	-	-	-	-	-
Mains & Services Expenses	3,573,456	DIST	-	-	-	-	-	-	-	-
M&R Station Expenses - General	-	DIST	-	-	-	-	-	-	-	-
M&R Station Expenses - Industrial	-	DIST	-	-	-	-	-	-	-	-
Meter & House Regulator Expenses	1,061,406	CUST	-	-	-	-	-	-	-	-
Customer Installation Expenses	636,680	CUST	-	-	-	-	-	-	-	-
Other Expenses	882,651	DIST	-	-	-	-	-	-	-	-
Rents	-	DIST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>7,080,188</b>		-	-	-	-	-	-	-	-
<b>Distribution Maintenance Expenses</b>										
Maint. Supervision & Engineering	-	DISTMNX	-	-	-	-	-	-	-	-
Maint. of Structures & Improv.	122,643	DIST	-	-	-	-	-	-	-	-
Maint. of Mains	833,130	DIST	-	-	-	-	-	-	-	-
Maint. of M&R Station Equip. - General	-	DIST	-	-	-	-	-	-	-	-
Maint. of Services	210,518	CUST	-	-	-	-	-	-	-	-
Maint. of Meters & House Regulators	269,244	CUST	-	-	-	-	-	-	-	-
Maint. of Other Equip.	99,144	DIST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>1,534,678</b>		-	-	-	-	-	-	-	-
<b>Total Distribution</b>	<b>8,614,866</b>		-	-	-	-	-	-	-	-
<b>Customer Account</b>										
Supervision	248,451	CACCTX	-	-	-	-	-	-	-	-
Meter Reading	304,150	CUST	-	-	-	-	-	-	-	-
Customer Records & Collection	1,611,586	CUST	-	-	-	-	-	-	-	-
Uncollectable Accounts	-		-	-	-	-	-	-	-	-
Misc. Customer Accounts	-	CUST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>2,164,187</b>		-	-	-	-	-	-	-	-
<b>Customer Service &amp; Information Expenses</b>										
Informational and Instructional Advertising Expenses	21,871	CUST	-	-	-	-	-	-	-	-
Misc Customer Assistance Expense	-	CUST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>21,871</b>		-	-	-	-	-	-	-	-
<b>Sales Expenses</b>										
Demonstrating & Selling Expenses	427,410	CUST	-	-	-	-	-	-	-	-
Advertising Expenses	-	CUST	-	-	-	-	-	-	-	-
Misc. Sales Expenses	77,946	CUST	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>505,356</b>		-	-	-	-	-	-	-	-
<b>TOTAL O &amp; M LABOR EXP.</b>	<b>12,461,298</b>		<b>1,054,531</b>	-	-	<b>1,054,531</b>	-	-	-	-

**Functional Cost Study  
 External Allocation Factors**

Name	Description		Total	Delivery Costs	Direct Gas Costs	Production Costs	Misc. Costs
<b>DEMAND ALLOCATORS</b>							
LPG_LNG	Production	DEM					
	Test Yr - Energy North		1	0.00%	0.00%	100.00%	0.00%
				1		1	
DIST	Distribution	DEM					
	Test Yr - Energy North		1	100.00%	0.00%	0.00%	0.00%
				1			
DPROD	Delivery & Production	DEM					
	Test Yr - Energy North		1	8.70%	0.00%	91.30%	0.00%
				0.087		0.913	
DPROD_K	Keene Production	DEM					
	Test Yr - Energy North		1	100.00%	0.00%	0.00%	0.00%
				1			
<b>CUSTOMER ALLOCATORS</b>							
CUST	Distribution Customer	CUS					
	Test Yr - Energy North		1	100.00%	0.00%	0.00%	0.00%
				1			
<b>COMMODITY ALLOCATORS</b>							
PROPANE	Propane Commodity	COM					
	Test Yr - Energy North		1	0.00%	0.00%	100.00%	0.00%
						1	
LNG	LNG Commodity	COM					
	Test Yr - Energy North		1	0.00%	0.00%	100.00%	0.00%
						1	
GASCOST	Allocated Gas Costs	COM					
	Test Yr - Energy North		1	0.00%	100.00%	0.00%	0.00%
					1		
GASSPLY	Gas Supply	COM					
	Test Yr - Energy North		1	0.00%	0.00%	0.00%	100.00%
							1
CUR_REV	Revenues at Current Rates	COM					
	Test Yr - Energy North		84,361,646	100.00%	0.00%	0.00%	0.00%
				84,361,646	-	-	-
PROP_REV	Proposed Revenues	COM					
	Test Yr - Energy North		99,286,484	97.98%	0.00%	1.72%	0.30%
				97,277,247		1,708,977	300,259
PREV_DEL	Proposed Revenues Delivery	COM					
	Test Yr - Energy North		1	100.00%	0.00%	0.00%	0.00%
				1			
PREV_PROD	Proposed Production Revenue	COM					
	Test Yr - Energy North		2,009,237	0.00%	0.00%	85.06%	14.94%
						1,708,977	300,259
INDIRECT	Settlement Indirect Expenses	COM					
	Test Yr - Energy North		(1,993,598)	0.00%	0.00%	99.34%	0.66%
						(1,980,428)	(13,170)
REG_COMM	Production Regulatory Comm. Exp	COM					
	Test Yr - Energy North		1	0.00%	0.00%	0.00%	100.00%
							1
OTH_REV	Other Revenue	COM					
	Test Yr - Energy North		1	100.00%	0.00%	0.00%	0.00%
				1			

**Functional Cost Study  
Internal Allocators**

Allocator		Description	Total	Delivery Costs	Direct Gas		
Name					Costs	Production Costs	Misc. Costs
PLANT	Total Plant in Service		641,189,774	631,599,724	-	9,590,051	-
	Percent		100.00%	98.50%	0.00%	1.50%	0.00%
OMEXPX	TOI and O&M Exp. excl. gas costs & uncollectible		41,072,858	40,267,114	-	542,495	263,249
	Percent		100.00%	98.04%	0.00%	1.32%	0.64%
PRODOEXP	Production Operations Expenses		567,242	49,350	-	517,892	-
	Percent		100.00%	8.70%	0.00%	91.30%	0.00%
PRODMNTX	Production Maintenance Expenses		119,531	10,399	-	109,132	-
	Percent		100.00%	8.70%	0.00%	91.30%	0.00%
DISTOPX	Distribution Operations Expense		9,827,435	9,827,435	-	-	-
	Percent		100.00%	100.00%	0.00%	0.00%	0.00%
DISTMNX	Distribution Maintenance Expense		3,998,904	3,998,904	-	-	-
	Percent		100.00%	100.00%	0.00%	0.00%	0.00%
CACCTX	Customer Accounting Expenses		3,111,589	3,111,589	-	-	-
	Percent		100.00%	100.00%	0.00%	0.00%	0.00%
LABOR	Labor expense excluding A&G		12,461,298	11,406,766	-	1,054,531	-
	Percent		100.00%	91.54%	0.00%	8.46%	0.00%
GENPLT	General Plant		39,736,540	36,373,854	-	3,362,686	-
	Percent		100.00%	91.54%	0.00%	8.46%	0.00%
AGxTRANSFER	A&G Expenses excluding transfer		24,329,537	21,583,355	-	1,924,954	821,229
	Percent		100.00%	88.71%	0.00%	7.91%	3.38%
AGEXP	Total A&G Expense		8,189,114	7,264,772	-	647,923	276,419
	Percent		100.00%	88.71%	0.00%	7.91%	3.38%
DISTRPLT	Distribution Plant		578,926,765	578,926,765	-	-	-
	Percent		100.00%	100.00%	0.00%	0.00%	0.00%
RTBASE	Rate Base		356,411,727	351,604,925	-	4,787,548	19,254
	Percent		100.00%	98.65%	0.00%	1.34%	0.01%
PDGPLT	Production, Distribution & General Plant		623,879,626	615,754,439	-	8,125,188	-
	Percent		100.00%	98.70%	0.00%	1.30%	0.00%