

### Testimony Experience of Timothy S. Lyons

<i>Sponsor</i>	<i>Date</i>	<i>Docket No.</i>	<i>Subject</i>
<b>Regulatory Commission of Alaska</b>			
ENSTAR Natural Gas Company	06/16	Docket No. U-16-066	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.
<b>Connecticut Public Utilities Regulatory Authority</b>			
Yankee Gas Company	07/14	Docket No. 13-06-02	Sponsored report and testimony supporting the review and evaluation of gas expansion policies, procedures and analysis.
<b>Illinois Commerce Commission</b>			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. 16-0401	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes and a decoupling mechanism.
<b>Iowa Utilities Board</b>			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. RPU-2016-0003	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes.
<b>Maine Public Utilities Commission</b>			
Northern Utilities, Inc. d/b/a Unitil Gas Limited	06/15	Case No. 2015-00146	Sponsored testimony supporting the proposed gas expansion program, including a zone area surcharge.
<b>Maryland Public Service Commission</b>			
Sandpiper Energy, Inc.	12/15	Case No. 9410	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new residential and commercial classes.
<b>Massachusetts Department of Public Utilities</b>			
Boston Gas	03/88	Docket No. DPU 88-67-II	Sponsored testimony supporting the rate reclassification of commercial and industrial customers for a rate design proceeding.
Boston Gas	03/90	DPU 90-55	Sponsored testimony supporting the weather and other cost of service adjustments, rate design and customer bill impact studies for a general rate case proceeding.
Boston Gas	10/93	DPU 92-230	Sponsored testimony describing the Company's position regarding rate treatment of vehicular natural gas investments and expenses.
<b>Missouri Public Service Commission</b>			
Laclede Gas Company	04/17	Docket No. GR-2017-0215	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
Missouri Gas Energy	04/17	Docket No. GR-2017-0216	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
Liberty Utilities	09/17	Docket No. GR-2018-00013	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
<b>New Hampshire Public Utilities Commission</b>			
Liberty Utilities d/b/a Granite State Electric Company	04/16	Docket No. DE 16-383	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.

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<b><i>New Jersey Board of Public Utilities</i></b>			
Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas Company	8/16	GR16090826	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
<b><i>Corporation Commission of Oklahoma</i></b>			
The Empire District Electric Company	04/17	Cause No. PUD 201600468	Adopted direct testimony and sponsored rebuttal testimony supporting the revenue requirements for a general rate case proceeding.
<b><i>Rhode Island Public Utilities Commission</i></b>			
Providence Gas Company	01/96	Docket No. 2076	Sponsored testimony supporting the rate reclassification of customers into new rate classes, rate design (including introduction of demand charges), and customer bill impact studies for a rate design proceeding.
Providence Gas Company	11/92	Docket No. 2025	Sponsored testimony supporting the Integrated Resource Plan filing, including a performance-based incentive mechanism.
Providence Gas Company	02/96	Docket No. 2374	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for largest commercial and industrial customers for a rate design proceeding.
Providence Gas Company	04/97	Docket No. 2552	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for commercial and industrial customers, including redesign of cost of gas adjustment clause, for a rate design proceeding.
Providence Gas Company	08/01 09/00 08/96	Docket No. 1673	Sponsored testimony supporting the changes in cost of gas adjustment factor related to projected under-recovery of gas costs; Filed testimony and witness for pilot hedging program to mitigate price risks to customers; Filed testimony and witness for changes in cost of gas adjustment factor related to extension of rate plan.
Providence Gas Company	06/97	Docket No. 2581	Sponsored testimony supporting a rate plan that fixed all billing rates for three-year period; included funding for critical infrastructure investments in accelerated replacement of mains and services, digitized records system, and economic development projects.
Providence Gas Company	08/00	Docket No. 2581	Sponsored testimony supporting the extension of a rate plan that began in 1997 and included certain modifications, including a weather normalization clause.
Providence Gas Company	03/00	Docket No. 3100	Sponsored testimony supporting the de-tariff and deregulation of appliance repair service, enabling the Company to have needed pricing flexibility.

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<i>Sponsor</i>	<i>Date</i>	<i>Docket No.</i>	<i>Subject</i>
<b><i>Railroad Commission of Texas</i></b>			
CenterPoint Energy – Houston Division and Texas Coast Division	11/16	GUD No. 10567	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Atmos Pipeline – Texas	01/17	GUD No. 10580	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
<b><i>Vermont Public Service Board</i></b>			
Vermont Gas Systems	02/11	Docket No. 7712	Sponsored testimony supporting the market evaluation and analysis for a system expansion and reliability regulatory fund.
Vermont Gas Systems	12/12	Docket No. 7970	Sponsored testimony describing market to be served by \$90 million natural gas expansion project to Addison County, VT. Also described the benefits of the project as well as the Company's programs and service offerings. Sponsored testimony describing the economic benefits and terms of a special contract with International Paper.

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**Summary of Levelized Cost Analysis**

Levelized Cost Analysis	Granite Bridge Pipeline		Granite Bridge LNG Facility
	Cost	Unit Cost	Cost
Levelized Annual Costs	[REDACTED]		
<b>Facility Costs</b>			
Investment	\$ 109,993,165		\$ 201,706,990
Add: AFUDC	[REDACTED]		
Total Facility Cost	[REDACTED]		
O&M Expenses	\$ 567,515		[REDACTED]
ACQ (Dth, MCF)		27,375,000	

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### Levelized Cost Analysis: Granite Bridge Pipeline

Granite Bridge Pipeline	Year	Year	Year	Year	Year	Year
Financial Analysis	2021	2030	2040	2060	2070	2075
Years	1	10	20	40	50	55
<b>Total Cost of Facility Investment</b>						
Revenues to Achieve ROE						
O&M Expense	626,583	748,824	912,813	1,356,391	1,653,434	1,825,524
Uncollectible Expense						
Depreciation Expense						
Property Taxes						
Property Insurance						
Interest Expense						
Return Requirement						
Income Taxes						
Total Cost						
PV of Total Cost						
<b>NPV of Total Cost</b>						
<b>Levelized Carrying Cost</b>						
Initial Investment	\$ 109,993,165					
<b>Levelized Carrying Charge</b>	<b>11.68%</b>					
Rate Base						
Equity						
Debt						
Return on Equity	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%

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### Levelized Cost Analysis: LNG Facility

Granite Bridge LNG Facility Financial Analysis	Year 2022	Year 2031	Year 2041	Year 2051	Year 2061
	1	10	20	30	40
<b>Total Cost of Facility Investment</b>					
Revenues to Achieve ROE					
O&M Expense					
Uncollectible Expense					
Depreciation Expense					
Property Taxes					
Property Insurance					
Interest Expense					
Return Requirement					
Income Taxes					
Total Cost					
PV of Total Cost					
<b>NPV of Total Cost</b>					
<b>Levelized Carrying Cost</b>					
<b>Initial Investment</b>	\$ 201,706,990				
<b>Levelized Carrying Charge</b>	13.90%				
Rate Base					
Equity					
Debt					
Return on Equity	9.50%	9.50%	9.50%	9.50%	9.50%

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## Assumptions

Financial Assumptions	
<b>Income Taxes</b>	
Federal	34.00%
State	<u>7.90%</u>
Combined	39.21%
<b>Cost of Capital</b>	
Equity	50.00%
Cost of Equity	9.50%
Cost of Debt	<u>4.43%</u>
Weighted Capital Cost	6.97%
Discount Rate	6.10%
Inflation	2.00%
Uncollectible	1.00%
<b>Working Capital (Net Lead-Lag Days)</b>	
O&M	27
Property Taxes (of net plant)	2.29%
Property Insurance (of net plant)	0.013%
<b>Levelized Rate</b>	
Granite Bridge Pipeline	6.34%
Granite Bridge LNG Facility	6.73%
<b>Book Depreciation (Years)</b>	
Granite Bridge Pipeline	55
Granite Bridge LNG Facility	40

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