

**Northern Utilities, Inc.
New Hampshire Division
d/b/a Unitil
Rate Case Studies
Request for Proposal**





	Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal	RFP No.	USC
		Page No.	TOC
		Date:	4/20/2021

Table of Contents

1. Introduction	3
1.1 Background	3
2. Scope of Proposed Work.....	4
2.1 Area 1: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization.....	4
2.2 Area 2: Revenue Decoupling.....	4
2.3 Area 3: Return on Equity	5
2.4 Area 4: Depreciation Study	5
2.5 Pre-Filed Direct Testimony	5
2.6 Post-Filing Support	5
2.7 Requirements	5
3. Administrative	6
3.1 Term of Award.....	6
3.2 RFP Schedule	6
3.3 Intent to Bid	7
3.4 Questions	7
3.5 Submission of Proposals.....	7
3.6 No Referrals.....	7
3.7 Award Notification	7
3.8 Ownership of Materials.....	7
3.9 Rejection of Proposals.....	8
3.10 Errors in Proposals	8
3.11 Confidentiality.....	8
3.12 Contract Terms and Conditions	8
3.13 Fee Structure & Timeline	8
3.14 Billing.....	9
3.15 Evaluation Criteria	9

	<p align="center">Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal</p>	RFP No.	USC
		Page No.	3
		Date:	4/20/2021

1. Introduction

Northern Utilities, Inc. d/b/a Unitil (“Unitil” or “Company”) is seeking responses to this Request for Proposal (“RFP”) to provide Unitil with expert assistance in preparing several studies for a natural gas base rate case filing for its New Hampshire Division, which it intends to present to the New Hampshire Public Utilities Commission (“Commission”) on or before July 30, 2021 based on test-year costs for the 12-month period ending December 31, 2020. As described under Scope of Proposed Work (Section 2), the Company is seeking assistance in four areas. Unless specified otherwise, the consultant undertakes all required analyses and studies with Unitil staff providing the underlying data and general guidance based on the specific characteristics of its operations. You may submit single bid(s) on any area and/or provide a combined bid on any or all areas. Combined bids must still be broken down between each area however. Bidders providing combined bids are also encouraged to provide single stand-alone bids as combined bids will be considered “all or nothing” unless otherwise specified.


Each proposal should be prepared simply and economically, providing a straightforward, concise description of the Bidder’s ability to meet the requirements of this RFP. Emphasis should be on completeness, clarity of content, responsiveness to the requirements, and an understanding of Unitil’s needs.

By submitting proposals, each proposer certifies that it understands this RFP and has full knowledge of the scope, nature, quality, and quantity of the work to be performed, the detailed requirements of the services to be provided, and the conditions under which the services are to be performed. Each Bidder also certifies that it understands that all costs relating to preparing and responding to this RFP, including, but not limited to providing additional information or attending an interview will be the sole responsibility of the Bidder.

Should the Company find it necessary, modification to the RFP will be made by addenda.

1.1 Background

Northern Utilities, Inc. is a wholly-owned utility subsidiary of Unitil Corporation, providing natural gas distribution service in southeastern New Hampshire and portions of southern and central Maine. Northern Utilities provides service to approximately 35,000 customers in New Hampshire and 34,000 customers in Maine, ranging from Plaistow, New Hampshire in the south to the city of Portland, Maine and then extending to Lewiston-Auburn, Maine in the north. Unitil Corporation’s other utility subsidiaries include Fitchburg Gas and Electric Light Company, a local electric and natural gas distribution utility operating in north central Massachusetts, and Unitil Energy Systems, Inc., a local electric distribution utility operating in New Hampshire. Unitil Corporation is also the parent company of Granite State Gas Transmission, Inc., an interstate natural gas pipeline. Other subsidiaries include Unitil Service Corp., which provides a variety of shared administrative and professional services, including regulatory, financial, accounting, human resources, engineering, operations, technology and energy supply management services on a centralized basis to all the utility subsidiaries.

	Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal	RFP No.	USC
		Page No.	4
		Date:	4/20/2021

2. Scope of Proposed Work

The scope of proposed work encompasses four areas as defined below in sections 2.1, 2.2, 2.3 and 2.4.

2.1 Area 1: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization

The chosen expert (“Winning Bidder”) will be responsible for developing and supporting the Company’s Allocated or Accounting Cost of Service Studies (“ACSS”) and Marginal Cost Study (“MCS”). The Company will prepare its revenue requirement and cost of service using in-house models and personnel. The Winning Bidder will use the results of these studies prepared by the Company’s in-house personnel to develop the ACSS, MCS and any other studies.


The Winning Bidder’s work will include a functional breakout between production and distribution such that the components of indirect gas costs (Local Production Capacity and Liquefied Natural Gas Storage costs, as well as miscellaneous administrative and general costs associated with providing gas supply service, as defined in the Company’s Cost of Gas Adjustment Clause tariff) will be separately identified as will the revenue required for distribution rates.

The Winning Bidder will be responsible for developing and supporting Company rate design for all classes and rate schedules. The Winning Bidder will fully understand how the above ACSS and MCS are used in designing Company rates, the Commission policies for using each study in designing rates, determining the fairness and efficiency of the costs to serve each rate class, and whether any cross-subsidies exist between rate classes.

The Winning Bidder will be responsible for developing and supporting the Company’s weather, sales and revenue normalization adjustments for typical or normal conditions within the 2020 test year. The Winning Bidder will be responsible for defending its inclusion in the Company’s revenue requirement and cost of service.

2.2 Area 2: Revenue Decoupling

The Winning Bidder will design the Company’s first Revenue Decoupling Mechanism (RDM), that supports the Company’s energy efficiency objectives while allowing the Company to maintain a reasonable return during periods of declining (or increasing) sales. In Commission Docket DE 15-137, as part of a settlement agreement, the NH gas and electric utilities agreed to seek approval of a new decoupling mechanism, or another mechanism as an alternative to the lost revenue adjustment mechanism, in its next distribution rate case following the first triennium of the Energy Efficiency Resource Standard, 2018-2020.

	<p align="center">Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal</p>	RFP No.	USC
		Page No.	5
		Date:	4/20/2021

2.3 Area 3: Return on Equity

The Winning Bidder will prepare and support an appropriate cost of equity for the Company. The Winning Bidder shall propose a variety of approaches to determining the appropriate cost of equity, including but not limited to the Discounted Cash Flow model, the Capital Asset Pricing Model, the Risk Premium model, and the Comparable Earnings Approach. The Winning Bidder will fully understand and aid the Company in using each of these methods and the Commission's method of using each in determining the appropriate cost of equity capital for companies under its jurisdiction.

2.4 Area 4: Depreciation Study

The Winning Bidder will undertake a comprehensive depreciation study for the Company that will support the appropriate depreciation rates for the Company. This depreciation study will be based on test-year costs. The Winning Bidder will fully understand and aid the Company and any retained outside consultants in using all of the necessary components of the depreciation study as well as the Commission's method in determining the appropriate depreciation rates for all plant for natural gas distribution companies under the Commission's jurisdiction. The Company's last depreciation study was performed for the test year ending December 31, 2016.

2.5 Pre-Filed Direct Testimony

In addition to all of the above (2.1, 2.2, 2.3 and 2.4), the Winning Bidder(s) will present pre-filed direct testimony that supports the area of work, defends the methods used to determine the results, and the Company's position regarding these results, and will present a complete and comprehensive discussion as to how the chosen methods and models used to support the findings and recommendations comport with Commission precedent.


2.6 Post-Filing Support

Also, the Winning Bidder(s) will support pre-filed direct testimony with responses to information requests as may be issued by the Commission or other intervening parties, assist in the interrogation of testimony as may be submitted by other parties to the proceeding (supporting or challenging the Company's position), which may include filing responsive testimony, attend hearings for cross-examination, respond to in-hearing record requests and assist in the drafting and review of legal briefs submitted to the Commission.

2.7 Requirements

The proposal (irrevocable for 90 days) shall be prepared on printable 8 ½" x11" paper and include in concise but adequate detail the following information:

- The Bidder shall provide a brief transmittal letter on business stationery with company logo. An individual authorized to bind the company to all statements in the proposal, including services and pricing must sign the letter. This letter shall indicate the mailing address of the

	Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal	RFP No.	USC
		Page No.	6
		Date:	4/20/2021

office from which the proposal is submitted and the name and contact information of the primary contact person.

- Corporate capabilities and experience on similar projects in other jurisdictions and before the Commission;
- A proposed project staff, including a Project Manager;
- The experience of the project team (not the firm) and resumes which indicate the location of each individual;
- Minimum of three references for similar projects and for the proposed Project Manager;
- Identification and discussion of any actual or potential conflict of interest your firm might have in providing services to Unitil;
- Each firm must certify in writing that its representation of the Company will not create any conflict of interest involving that firm;
- A description of the technical basis for your approach to completing the project, including a narrative discussion of any proposed modifications to the Scope of Proposed Work;
- A work breakdown of project tasks and staff assigned to each task;
- An outline of the planned schedules and work papers that will support the findings and recommendations;
- A proposed project schedule.
- Completed Project Price Sheet (s) attached hereunto as Attachments 1 through 4.

3. Administrative

3.1 Term of Award


All agreements awarded will be designated to calendar years 2021, 2022 and 2023.

3.2 RFP Schedule

The following list the activities relevant to the RFP process and subsequent project. Unitil reserves the right to change these dates and will notify Bidders in such a case.

RFP Schedule

Event	Time	Date
RFP Released		4/20/2021
Intent to Bid Due	5:00 PM	4/23/2021
RFP Questions Deadline	5:00 PM	4/26/2021
RFP Responses to Questions	5:00 PM	4/28/2021
Proposal Due	5:00 PM	5/3/2021
Bid Awarded	5:00 PM	5/6/2021

	<p align="center">Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal</p>	RFP No.	USC
		Page No.	7
		Date:	4/20/2021

3.3 Intent to Bid

All interested bidders must submit their 'Intent to Bid' through the Bonfire portal no later than **April 23, 2021** by 5:00 PM EST. Submission of this intent constitutes the Bidders' acceptance of the RFP schedule, procedures, evaluation criteria and other administrative requirements.

3.4 Questions

Submit questions in writing via the Bonfire portal. No telephone or e-mail questions will be accepted or considered. Bidders should refer to the specific RFP paragraph number and page and should quote the passage being questioned. Unitil will respond to questions as per the RFP Schedule and will send answers to Bidders as a group. Unitil will remove Bidder names from the text of the questions and answers being sent. The deadline date for submission of questions is located in Section 3.2 RFP Schedule.

3.5 Submission of Proposals

Proposals are due **May 3, 2021 by 5:00 PM EST. Submission bids via the Bonfire website is mandatory**; no hard copies will be accepted. Bids **MUST** be received on Bonfire by the due date and time in order to be considered.

****we recommend NOT waiting to the last minute to upload your proposal and accompanying documents.**

3.6 No Referrals


Bidders may not refer or pass on this RFP to another Bidder without prior approval from Unitil.

3.7 Award Notification

After winning bid is selected, the Winning Bidder will be notified of Unitil's Intent to Award, contingent on successful negotiations; all remaining bidders will be notified of their selection status.

3.8 Ownership of Materials

All materials submitted in response to this RFP will be considered property of Unitil. Proposals and supporting material will not be returned to Bidders. Unitil expressly reserves the right to utilize any and all ideas submitted in the proposals received unless covered by legal patent or proprietary rights which must be clearly noted in the proposal submitted in response to the RFP.

	<p align="center">Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal</p>	RFP No.	USC
		Page No.	8
		Date:	4/20/2021

3.9 Rejection of Proposals

This RFP does not commit Unitil to select a Bidder or to award a contract to any Bidder. Unitil reserves the right to accept or reject, in whole or in part, any proposal it receives pursuant to this RFP.

3.10 Errors in Proposals

Unitil is not liable for errors in Bidder proposals. A Bidder may correct an error in their proposal with Unitil's approval. Changes after the submission date may be made only to correct an error in an existing part of the proposal. New material may not be submitted, unless requested by Unitil.

3.11 Confidentiality

All information provided by Unitil in this RFP or subsequent verbal or written communications shall be considered confidential and for express use only in connection with the preparation of the RFP response. Bidders may not use, disclose, or duplicate this RFP or any information contained herein for any purpose other than responding to this RFP. Your firm's responses to this RFP will be treated in a confidential manner and will be filed under confidential cover if requested during discovery.

3.12 Contract Terms and Conditions


Winning Bidder(s) shall be required to complete contractual requirements, including but not limited to, execution of the Unitil Rate Case Consulting Services Agreement and Mutual Confidential Non-Disclosure Agreement.

The Winning Bidder(s) must agree to provide Unitil with audit access on request during the term of the contract and for two (2) years thereafter.

Unitil at any time, in its sole discretion, may terminate its contract with the Winning Bidder(s) or postpone or delay all or any part of the contract, upon 30 day written notice.

3.13 Fee Structure & Timeline

Based on the Scope of Proposed Work, each proposal should include completed Project Price Sheet(s), which are enclosed as Attachments 1 through 4. Costs through preparation of the filing are to be provided on a "not to exceed" basis. Post-filing activities may be bid on a time and materials basis. The attachments contain instructions as to the information required in submitting a complete proposal.

	<p align="center">Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal</p>	RFP No.	USC
		Page No.	9
		Date:	4/20/2021

In addition to this submittal, each bidder is required to prepare a schedule outlining the time required to accomplish the area's Scope of Proposed Work, and a date when the work will be completed.


Proposals shall be complete in order to avoid costs beyond the contract price. Each bidder shall, therefore, include all work which is indicated in the specified area and which is normally considered a part of the type of work covered by the Scope of Proposed Work, whether or not such work is fully detailed.

3.14 Billing

Consistent with the requirements of the Commission, Unitil will require detailed hourly billing that will withstand the scrutiny of the Commission for rate case cost recovery. This means that bills should be detailed enough to justify cost recovery to the Commission while not divulging litigation work product, including the number of hours worked, the billing rate, and the specific nature of services performed. All other out-of-pocket expenses, including cost of travel or travel-related expenses, telephone, duplication, and delivery costs ("Other Direct Costs") should be tracked and identified separately on bills. Unitil will remit payment on all appropriate invoices within thirty (30) days of receipt

3.15 Evaluation Criteria

Each response to this RFP will be evaluated against the following seven criteria: (1) corporate capability, including overall corporate capabilities, and corporate experience with similar issues; (2) project team capability, including qualifications of the proposed staff, and qualifications of the proposed staff in the above-described subject matter; (3) technical approach, including the response to the RFP requirements and proposed innovative approaches; (4) proposal quality; (5) pricing, including the proposed price for the work and proposed unit rates, including markup; (6) commercial review, including both minor and major commercial impediments (e.g. conflicts of interest, etc.); and (7) interviews, if conducted.

	Northern Utilities, Inc. – NH Division Rate Case Studies Request for Proposal	RFP No.	USC
		Page No.	10
		Date:	4/20/2021

Attachment 1 – Area 1: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization

Project Price Sheet for Scope of Proposed Work

Attachment 2 – Area 2: Revenue Decoupling

Project Price Sheet for Scope of Proposed Work

Attachment 3 – Area 3: Return on Equity

Project Price Sheet for Scope of Proposed Work

Attachment 4 – Area 4: Depreciation Study

Project Price Sheet for Scope of Proposed Work

Northern Utilities, Inc.
New Hampshire Division
d/b/a Unitil
Request for Proposal

Area 1: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization

Attachment 1

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	\$		
Research	\$		
Analyses or Studies	\$		
Other Direct Costs	\$		
Total Not To Exceed (through filing)		\$	
Respond to Discovery	\$		
Assist in the Interrogation of Testimony	\$		
Prepare Rebuttal Testimony	\$		
Attend Hearings	\$		
Respond to In-Hearing Record Requests	\$		
Assist in Drafting of Legal Brief	\$		
Other Direct Costs	\$		
Total Cost Estimates (post-filing)		\$	
Grand Total			\$

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.

Northern Utilities, Inc.
New Hampshire Division
d\b\ a Unitil
Request for Proposal

Area 2: Revenue Decoupling
Attachment 2

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	\$		
Research	\$		
Analyses or Studies	\$		
Other Direct Costs	\$		
Total Not To Exceed (through filing)		\$	
Respond to Discovery	\$		
Assist in the Interrogation of Testimony	\$		
Prepare Rebuttal Testimony	\$		
Attend Hearings	\$		
Respond to In-Hearing Record Requests	\$		
Assist in Drafting of Legal Brief	\$		
Other Direct Costs	\$		
Total Cost Estimates (post-filing)		\$	
Grand Total			\$

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.

Northern Utilities, Inc.
New Hampshire Division
d\b\ a Unutil
Request for Proposal

Area 3: Return on Equity
Attachment 3

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	\$		
Research	\$		
Analyses or Studies	\$		
Other Direct Costs	\$		
Total Not To Exceed (through filing)		\$	
Respond to Discovery	\$		
Assist in the Interrogation of Testimony	\$		
Prepare Rebuttal Testimony	\$		
Attend Hearings	\$		
Respond to In-Hearing Record Requests	\$		
Assist in Drafting of Legal Brief	\$		
Other Direct Costs	\$		
Total Cost Estimates (post-filing)		\$	
Grand Total			\$

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unutil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unutil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.

Northern Utilities, Inc.
New Hampshire Division
d\b\ a Unitil
Request for Proposal

Area 4: Depreciation Study
Attachment 4

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	\$		
Research	\$		
Analyses or Studies	\$		
Other Direct Costs	\$		
Total Not To Exceed (through filing)		\$	
Respond to Discovery	\$		
Assist in the Interrogation of Testimony	\$		
Prepare Rebuttal Testimony	\$		
Attend Hearings	\$		
Respond to In-Hearing Record Requests	\$		
Assist in Drafting of Legal Brief	\$		
Other Direct Costs	\$		
Total Cost Estimates (post-filing)		\$	
Grand Total			\$

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.



Gannett Fleming

*Excellence Delivered **As Promised***

ISO 9001:2015
CERTIFIED

RFP NO. USC-42021

**PROPOSAL FOR
RATE CASE STUDIES**

PREPARED FOR

NORTHERN UTILITIES, INC. – NH DIVISION

d/b/a UNITIL



*Excellence Delivered **As Promised***

May 3, 2021

Uploaded via Bonfire

Northern Utilities, Inc. – NH Division
d/b/a Unitil
6 Liberty Lane West
Hampton, NH 03842

Ladies and Gentlemen:

RFP USC42021 – Rate Case Studies

Gannett Fleming Valuation and Rate Consultants, LLC (“Gannett Fleming”) is pleased to submit this proposal to conduct rate case studies for Northern Utilities, Inc. – NH Division, d/b/a Unitil (“Unitil” or “Company”) related to its gas assets. This proposal includes single bids for Area 1 (Cost of Service Studies) and Area 4 (Depreciation Study) of the Request for Proposal, as well as a combined bid for both areas. Gannett Fleming is not bidding on Area 2 (Revenue Decoupling) or Area 3 (Return on Equity). This proposal is based on the specifications set forth in the RFP and our overall experience and knowledge of conducting cost of service and depreciation studies, including the most recent depreciation studies for Fitchburg Gas and Electric Light Company and Unitil Energy Systems, Inc.

Gannett Fleming remains an industry leader in regards to cost of service studies, rate design and depreciation-related matters in the utility industry including allocation of costs, revenue recovery, life and net salvage analysis, depreciation accounting, data handling, theoretical reserve, valuation analysis and many others. The knowledge and experience of our team enables us to recognize and address possible concerns in any of the areas referenced above with your company’s management team and state and federal jurisdictions as necessary. Gannett Fleming has a proven track record of successfully preparing, presenting and defending, via expert testimony, depreciation-related positions to state, federal and provincial commissions across the United States and Canada.

A list of recent clients for both cost of service and depreciation studies is provided in our proposal. As part of the many studies listed, Gannett Fleming has also presented written and oral testimony and participated in hearings in numerous states and before the Federal Energy Regulatory Commission (FERC).

Gannett Fleming Valuation and Rate Consultants, LLC

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Northern Utilities, Inc. – NH Division
d/b/a Unitil

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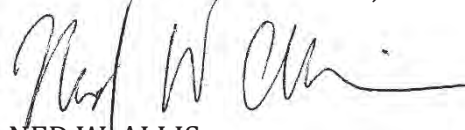
May 3, 2021

As Vice President of Gannett Fleming Valuation and Rate Consultants, LLC, Ned W. Allis has the authority to bind our firm to the contents of this proposal and any associated agreements or contracts related to the conduct of the services. The contents and estimates of cost contained in this proposal are valid until August 4, 2021. Gannett Fleming does not have any current or potential conflicts of interest if it is selected to perform the depreciation study.

We appreciate the opportunity to submit this proposal to Unitil and assure you that we will perform the work as efficiently and effectively as possible. If you have any questions or comments regarding the scope, compensation or estimate of costs as described herein, please do not hesitate to contact Ned Allis at 717-886-5714 or nallis@gfnet.com or Connie Heppenstall at 610-783-3785 or cheppenstall@gfnet.com.

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC



NED W. ALLIS
Vice President



CONSTANCE E. HEPPENSTALL
Senior Project Manager, Rate Studies

TABLE OF CONTENTS

EXECUTIVE SUMMARY	iii
 COMPANY PROFILE	
Gannett Fleming, Inc.....	1
Gannett Fleming Valuation and Rate Consultants, LLC.....	2
 AREA 1 – ALLOCATED COST OF SERVICE, MARGINAL COST STUDY, RATE DESIGN AND WEATHER, SALES AND REVENUE NORMALIZATION ADJUSTMENTS	
PROJECT WORK PLAN.....	4
Task 1: Project Initiation Meeting & Data Assembly	5
Task 2: Weather, Sales, Revenue Normalization Adjustments.....	5
Task 3: Allocated Cost of Service Study.....	6
Task 4: Marginal Cost Study	7
Task 5: Rate Design	7
Task 6: Management Review	8
Task 7: Draft and Final Reports	8
Task 8: Direct Testimony	8
Task 9: Regulatory Proceedings	9
Proposed Work Schedule.....	10
 QUALIFICATIONS AND EXPERIENCE.....	 11
 RESUMES	
Constance E. Heppenstall.....	13
Paul R. Herbert	15
Harold Walker.....	19
Gregory R. Herbert.....	22
 REFERENCE PROJECTS AND LIST OF REFERENCES	
Philadelphia Gas Works.....	24
UGI Utilities, Inc.	25
Pennsylvania American Water Company.....	26
List of References	27

AREA 4 – DEPRECIATION STUDY

PROJECT WORK PLAN	28
Task 1: Project Initiation Meeting.....	29
Task 2: Data Assembly and Review.....	30
Task 3: Statistical Analyses of Data	30
Task 4: Field Review and Management Conference.....	31
Task 5: Preliminary Estimates and Depreciation Calculations	32
Task 6: Management Review.....	33
Task 7: Final Estimates and Calculations.....	33
Task 8: Draft and Final Reports.....	33
Task 9: Direct Testimony and Regulatory Proceedings.....	34
Proposed Work Schedule.....	35

QUALIFICATIONS AND EXPERIENCE	36
--	----

RESUMES

Ned W. Allis	42
John J. Spanos	44
Glen A. Friel.....	47

REFERENCE PROJECTS AND LIST OF REFERENCES

Eversource Energy.....	49
Florida Power & Light Company	50
Pacific Gas & Electric Company	51
List of References	52

ESTIMATES OF COST – PROJECT PRICE SHEETS

Attachment 1 – Area 1 - Allocated Cost of Service Study - Project Price Sheet for Scope of Proposed Work	54
Attachment 4 – Area 4 - Depreciation Study - Project Price Sheet for Scope of Proposed Work	55
Gannett Fleming Valuation and Rate Consultants LLC 2021 Billing Rates.....	56

EXECUTIVE SUMMARY

Gannett Fleming, Inc., is an international engineering consulting firm with expertise in numerous disciplines. Founded in 1915, Gannett Fleming, Inc. has a long history of meeting clients' needs. Gannett Fleming Valuation and Rate Consultants, LLC (Gannett Fleming) and its predecessor, the Valuation and Rate Division of Gannett Fleming, Inc., have provided service to utility companies since the late 1930s and, in the last five years alone, have prepared over 100 depreciation and valuation studies to clients in almost every US state and Canadian province. Gannett Fleming's staff is preeminent in the field of rate regulation related to the cost of providing service for utilities and to depreciation and offers an unparalleled depth and breadth of experience. This expertise has been gained not only by conducting depreciation studies but also by actively participating within the depreciation field as educators and members of organizations that form depreciation standards. Our staff also possesses extensive experience in preparation of testimony for regulatory proceedings.

The Work Plan portion in this proposal for the Allocated Cost of Service Study, Marginal Cost Study, Rate Design, and Weather, Sales and Revenue Normalization Adjustments (Area 1) outlines how Gannett Fleming will analyze Company data, review and collaborate with Company management to develop the required studies and determine a defensible rate structure. Upon completion of the analysis and review, detail reports of the studies and related testimony are produced.

The Depreciation Project Work Plan (Area 4) portion of this proposal outlines how Gannett Fleming's staff thoroughly collects and processes data to provide a solid foundation for its recommendations to clients. Tasks include extensive statistical analyses of client data, discussions with management and field review of client facilities. Upon completion of the analysis and a review of the results by client management, a detailed report of the study is produced.

All Gannett Fleming personnel strive to provide the highest quality services to our clients. In performing a depreciation study, our objectives include:

- clearly defining the client's requirements;
- maintaining proper communication among participants;
- delivering services on time and within budget; and
- providing timely responses to client requests.

The culture of service, ingenuity and responsiveness within Gannett Fleming empowers its staff to fulfill a key mission of making clients successful.

The work we have proposed here for Unitil's allocated cost of service study, marginal cost study, weather, sales and revenue normalization adjustments, is expected to commence on or about May 6, 2021 and conclude with a final report and direct testimony prior to a July 30, 2021 filing date. Our single stand-alone bid for Area 1: Allocated Cost of Service Study, Marginal Cost Study, Rate Design and Weather, Sales and Revenue Normalization is a not-to-exceed cost of [REDACTED]. The work we have proposed here for Unitil's depreciation study is expected to commence on or about May 6, 2021 and conclude with a final report and direct testimony prior to a July 30, 2021 filing date. Our single stand-alone bid for Area 4: Depreciation Study is a not-to-exceed cost of [REDACTED]. Thus, the combined bid is a not-to-exceed cost of [REDACTED]

[REDACTED] The bid amounts and timelines for each of these studies do not include costs associated with supporting the studies in regulatory proceedings subsequent to the filing of the Company's rate case.

Upon completion of the final report, there is the option to retain Gannett Fleming Valuation and Rate Consultants, LLC for further services related to regulatory proceedings, i.e., post-filing services, as needed. These post-filing services will be invoiced on a time-and-materials basis using the billing rates in effect at the time the work is performed.

COMPANY PROFILE

GANNETT FLEMING, INC. (Parent Company)

Gannett Fleming, Inc. is an international consulting engineering firm with expertise in numerous disciplines including utility ratemaking, transportation, environmental, water, energy, and facility-related projects. The firm's headquarters is located in suburban Harrisburg, Pennsylvania. Regional offices are maintained in 22 states, two Canadian provinces and an office in Qatar and the United Arab Emirates. With approximately 2,600 highly qualified individuals across a global network across 60 offices, we are united in our passion to deliver excellence. We have played a part in shaping infrastructure and improving communities in more than 65 countries.

Founded in 1915, we embrace sustainability and innovation in our projects and internal activities, achieving results while being responsible stewards of our environment. Our culture of service, ingenuity, and responsiveness empowers us to fulfill a key objective: *make our clients successful.*

At Gannett Fleming, Inc., we take great pride in our ability to deliver a high-quality product to our clients. This commitment to quality is embodied in our written quality policy statement, namely to *"Provide professional services that meet the requirements of clients and involve all personnel in continually improving work*



**ISO 9001:2015
CERTIFIED**

processes." Not only is Gannett Fleming consistently ranked in the top 10 percent on *Engineering News-Record's* Top 500 Design Firms list, but we also maintain an ISO 9001:2015 certification for all practices and business units within our company. This is a major accomplishment and our clients – and the public they serve – are the ultimate beneficiary of this rigorous quality management program.

Gannett Fleming, Inc.'s Objectives

- *Determine the client's requirements*
- *Communicate with all parties*
- *Deliver projects on time and within budget*
- *Provide a thorough and timely response to client requests*

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Gannett Fleming Valuation and Rate Consultants, LLC (Gannett Fleming), a subsidiary of Gannett Fleming, Inc., provides engineering and management consulting services related to the regulation of public utility rates. Since 1915, Gannett Fleming Valuation and Rate Consultants, LLC and its predecessors have been helping clients in public pricing policy and related financial matters for managerial purposes, before regulatory commissions and courts of law. Our staff has considerable experience in providing an array of specialized financial services to support the core needs and objectives of our clients.

These specialized financial services encompass lead lag studies, cost of capital studies, utility valuations, rate studies, depreciation studies, analyses of public utility accounting systems, debt financing reports, economic and demographic studies, financial decision studies, economic valuation studies, optimum capital structure, debt service levels, dividend policy, private placement of debt, financial benchmarking, and conducting property inventories.

We design each study and its related report to meet the specific requirements of our clients. These studies require objective analyses of basic data, informed professional judgment, and clear presentation of the results. We have a significant number of staff assigned to the conduct of our specialized financial services and are committed to providing continuous quality services to our clients.

Our skilled staff includes professionals in:

- Depreciation
- Cost of Service
- Rate of Return
- Accounting
- Statistical and Actuarial Methods
- Engineering Valuation
- Finance
- Mathematical Theory
- Computer Systems and Programming

Our staff utilizes Gannett Fleming's own customized depreciation software, which in addition to providing the capabilities required for our depreciation studies, has also been licensed by regulatory agencies who rely upon it for dependable statistical life and net salvage analyses.

Representative lists of our experience in performing cost of service and depreciation studies are contained in the Qualifications and Experience sections of this proposal for Area 1 and Area 4.

History

The Valuation and Rate practice was developed following the establishment of the uniform systems of account for utility companies in the late 1930s. Initial work related to original cost research, development of continuing property records and valuations for rate base purposes. Depreciation services grew rapidly in the 1950s with the advent of machine computing and the ability to perform analyses and calculations using the methods pioneered by Robley Winfrey and others at Iowa State University in the 1930s and 1940s. Revenue requirement, cost of service allocation and rate design studies, although performed throughout our history, became a significant segment of our business during the double-digit inflation years of the 1970s. Gannett Fleming Valuation and Rate Consultants, LLC also has prepared and submitted numerous rate of return studies to various state utility commissions.

Expert Testimony

Our staff provides expert testimony in formal regulatory proceedings before numerous local, county, regional, state, provincial and federal bodies throughout the United States and Canada. We have a successful and proven record in arguing cost of service and depreciation issues and convincing utility commissions to adopt the recommendations set forth in our studies.

Recent examples include:

- Cost of Service studies
- Ratemaking treatment for net salvage (i.e., primarily removal costs)
- The life span approach for power plants
- Equal life group depreciation
- Theoretical reserve issues

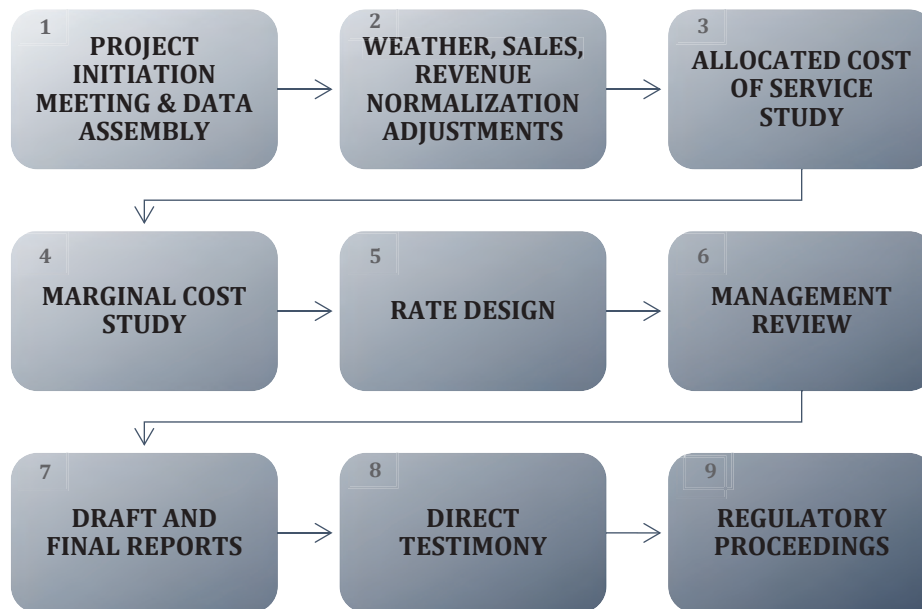
Additional Information

For further information about Gannett Fleming, Inc. and Gannett Fleming Valuation and Rate Consultants, LLC, our corporate website can be accessed at www.gannettfleming.com, and our company website at www.gfvrc.com.

**AREA 1: ALLOCATED COST OF SERVICE STUDY
(ACSS), MARGINAL COST STUDY (MCS),
RATE DESIGN AND WEATHER, SALES AND
REVENUE NORMALIZATION ADJUSTMENTS**

PROJECT WORK PLAN

Gannett Fleming's Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), rate design, and weather, sales and revenue normalization adjustments (Area 1) consists of nine primary tasks with a brief description provided below. The anticipated schedule for these tasks, which is based on an expectation that data can be provided in May of 2021, is set forth in the Gantt charts at the end of this section. The project team will consist of Constance E. Heppenstall as Project Manager; John J. Spanos as Project Principal; and analysts, assistant analysts and support staff. Resumes of the project team are provided on pages 13 through 23 in this proposal.



TASK 1. PROJECT INITIATION MEETING AND DATA ASSEMBLY

Gannett Fleming will initiate the Northern Utilities, Inc. – NH Division, d/b/a Unitil (“Unitil” or “Company”) studies with a meeting to review the objectives of Area 1. We will provide Unitil with pre-filing advice and assistance as needed. Our extensive experience with public utility commissions will help the Company develop a successful filing. We keep up to date on the latest filing options and requirements.

During the initiation meeting, we will present to the Company a set of data request items to be collected by the Company and provided to Gannett Fleming for data assembly and analysis. These requested items will assist in the completion of the following Tasks.

TASK 2. WEATHER, SALES AND REVENUE NORMALIZATION ADJUSTMENTS

In conjunction with the ACSS and MCS, we will develop and support weather, sales and revenue normalization adjustments for typical or normal conditions within the 2020

test year. Even though the Company is requesting a Revenue Decoupling Mechanism ("RDM"), revenues recovered from a RDM lag current revenue. As a result, it is important to minimize any revenues collected through an RDM. Therefore, revenues in the test year need to be reflective of a "normal" year as much as possible since the Company's revenues are weather dependent. We will include these adjustments in the Company's revenue and revenue requirement calculations and cost of service and defend, through testimony and exhibits, that these adjustments are equitable. The adjustment will be based on a comparison of historical average effective degree days as compared to the test year's effective degree days.

TASK 3. ALLOCATED COST OF SERVICE STUDY

Gannett Fleming will perform an Allocated Cost of Service Study ("ACSS") that follows the principles set forth in "Gas Rate Fundamentals" published by the American Gas Association's Rate Committee. The study will use the revenue requirements and cost of service established in-house by the Company for the projected test year to develop the Allocated Cost of Service Study ("ACSS") and the Marginal Cost Study ("MCS"). For the ACSS, we recommend that Unitil use the Average and Extra Demand Method of allocation which we have used in other natural gas cases before other regulatory commissions. The purpose of an ACSS is to allocate costs of the utility to the several customer classifications based on considerations of quantity of gas consumed; sales and transportation; demand characteristics; and costs associated with metering, billing, and accounting. The ACSS will be based on recognized procedures for allocating costs to customer classifications in proportion to each classification's use of the facilities, commodity, and services which entail the total cost of providing gas service.

As stated above, we recommend an allocated cost of service based on the "Average and Extra Demand Method" described in "Gas Rate Fundamentals,". The three basic categories of cost responsibility for a gas cost of service are commodity, capacity, and customer costs. In the Average and Extra Demand Method, the capacity costs are allocated to service classifications on a combined basis of average use and use above average at peak demands. The costs and the way they are allocated are described below:

Commodity Costs are the costs that tend to vary with the quantity of gas used. Commodity costs in this study include production plant expenses and associated costs. Commodity costs are allocated to service classifications based on average daily sales volumes.

Capacity Costs are costs associated with meeting the peak demands of the system. Capacity costs attributable to sales and transportation service include distribution expenses and capital costs not associated with the customer costs category. Capacity

costs are allocated to service classifications on a combined basis of average use and extra demand (demand in excess of average use). For presentation purposes, the commodity and capacity costs are combined into the volumetric function for each classification.

Customer Costs are costs associated with serving customers regardless of their usage or demand characteristics. Customer costs include the expenses and capital costs related to meters, regulators, and services and expenses related to meter reading and billing and a portion of distribution costs. The customer costs are allocated to service classifications on the bases of the number of meters, services and customers.

TASK 4. MARGINAL COST STUDY

A Marginal Cost Study is used to estimate the cost of supplying an additional unit of service in the long term. The cost estimates are allocated by customer class usage demands which determine revenue requirements that can be used as a framework for setting proposed rates. MCS is important as a guideline for ratemaking as rates are set to promote rational customer consumption decisions and promotes an efficient allocation of resources. If customers are sent accurate price signals that will affect their consumption levels, then the Company is more efficient, and customers can make better decisions regarding their energy use. Our study will include a functional breakout between production and distribution such that the components of indirect gas costs will be separately identified, as will the revenue required for distribution rates.

Our study will be based off the Company's filings in Dockets DG 13-086 and DG 17-070. The settling parties in DG 13-086 agreed to use the same methods for estimating costs in proceeding DG 17-070, and as the interested parties in the proceeding DG 17-070 settled, we will continue using the same Equi-Proportional Method, as it is accepted by the New Hampshire Public Utilities Commission. Using past studies as a base for the current rate case will provide continuity and cost savings to all the interested parties.

The MCS will summarize the results by customer class and cost component. The resulting marginal costs will become the initial revenue targets for the design of the Delivery Service rates.

TASK 5. RATE DESIGN

The results of Task 2, Task 3 and Task 5 will allocate costs to the appropriate customer classes reflected in Unitil's tariff. Connecting with Company management throughout the project, the results of the cost of service studies will then be used to develop the Company's class revenue apportionment proposal and the resulting rate design.

For rate design, the cost of service by class is compared to the revenue by class under present rates to determine if the revenue collected is commensurate with the class cost of service. Proposed rates would then be adjusted to move revenue by class toward cost of service. In setting rates, we will also examine the Company's current rate structure, including evaluating whether declining block structure is appropriate. Though we will defer to the Company's recommendation, we find that declining block structures do not reflect actual costs to provide gas to heating customers and send the wrong signal for conservation, particularly for Tariff Rates R5 and R10.

The findings of the ACSS, MCS and resulting rate design will be presented in the form of direct testimony and supporting financial exhibits suitable for filing before the NH PUC.

TASK 6. MANAGEMENT REVIEW

The results of the ACSS, MCS and RDM will be reviewed with management to ensure that the results are in accordance with management's policies and outlook. After the review, draft and final reports suitable for filing with the NH PUC will be prepared.

TASK 7. DRAFT AND FINAL REPORTS

Gannett Fleming will draft reports for Unitil setting forth the results of our studies. The reports will include the plan and basis of the study, the allocation procedures and methodologies used and the results of the study. The draft will be submitted to Company management for comments. The final report reflecting comments received from Unitil will be prepared and forwarded in both paper and electronic format in anticipation of a July 30, 2021 filing date. Our report will consist of the following sections:

- I. Introduction
- II. Explanation of Methodologies and Exhibits
- III. Results
- IV. Exhibit for Weather, Sales and Revenue Normalization Adjustments
- V. Allocated Cost of Service Study Exhibit/Workpapers
- VI. Marginal Cost Study Exhibit/Workpapers
- VII. Comparison Schedule of Rates – Under Present/Proposed Rates

TASK 8. DIRECT TESTIMONY

Constance E. Heppenstall will prepare direct testimony and supporting information on behalf of the Company related to the foregoing studies prepared by Gannett Fleming. Ms. Heppenstall has testified before the Pennsylvania Public Utility Commission (PA PUC) in

eleven rate cases during her career. Connie has also presented testimony in the following other jurisdictions: Arizona, Kentucky, Missouri, Virginia, Hawaii, West Virginia, Indiana, and California. She will be advised by Paul R. Herbert, Senior Consultant, on the project. Mr. Herbert was the project manager and witness for past UGI Utilities, Inc. (Pennsylvania) rate cases. Connie's and Paul's resumes and list of rate cases are provided on pages 13 through 18 of this proposal

TASK 9. REGULATORY PROCEEDINGS

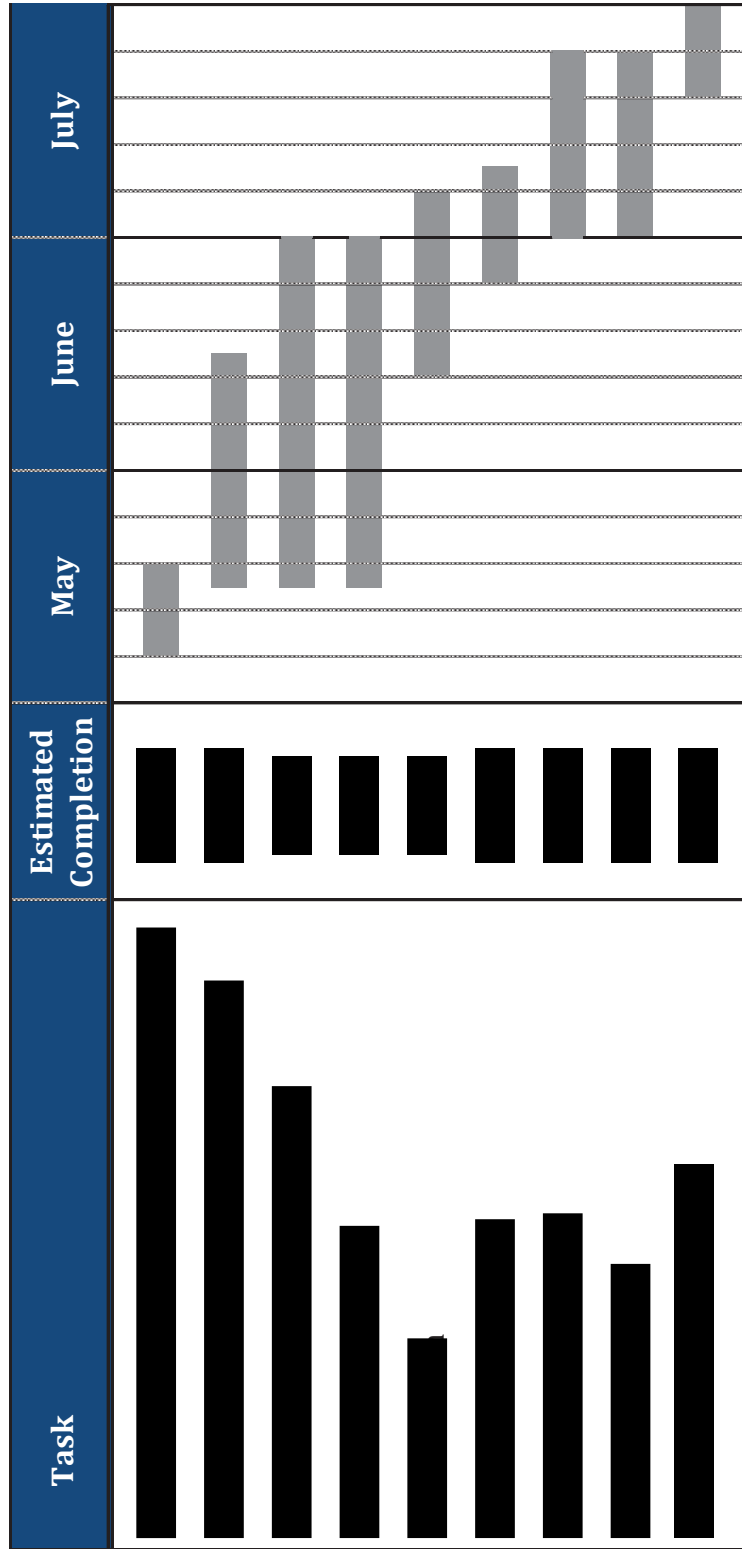
Gannett Fleming will support the ACSS, MCS and RDM studies throughout the regulatory process responding to information requests related to the underlying tasks of Area 1 of this proposal and providing expert testimony in a regulatory hearing.

Our proposal to complete the rate case filing for Area 1, including the preparation of direct testimony, is an amount not to exceed [REDACTED]. This estimate is provided in the Estimates of Cost – Project Price Sheets section of this proposal.

The workload associated with the regulatory process varies significantly from one proceeding to another; thus, it is difficult to estimate the effort associated with responding to information requests and actual attendance at hearings. We have not developed an estimate of the hours required for this task; and, as such, this task has not been included in the calculation of our compensation. Gannett Fleming's charge for work subsequent to the submission of the reports and direct testimony to Unitil is determined on an hourly (time-and-materials) basis based on the billing rates in effect when the work is performed. A schedule setting forth Gannett Fleming's current billing rates is included in the Estimates of Cost - Project Price Sheets section of this proposal.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION, d/b/a UNITIL
AREA 1: ALLOCATED COST OF SERVICE STUDY (ACSS), MARGINAL COST STUDY (MCS), RATE DESIGN AND WEATHER, SALES AND REVENUE NORMALIZATION

WORK PLAN SCHEDULE



* To be determined upon completion of study

QUALIFICATIONS AND EXPERIENCE

Gannett Fleming Valuation and Rate Consultants, LLC is uniquely qualified to conduct this very important assignment. Our approach to this assignment will be to perform thorough investigations and analyses, make sound professional judgments, and develop supportable conclusions. This approach will result in sound and defensible rate schedules.

Our experience includes cost of service and rate design studies for many clients, as shown in the list of clients below. Many of these clients have water and sewer systems with infrastructure exceeding 100 years of age.

The project manager assigned to Area 1 of the RFP is Constance E. Heppenstall, Senior Project Manager, Rate Studies. Connie has 15 years of experience conducting cost of service and rate design studies for multiple municipal and private water companies. She is located in the firm's office in Valley Forge, Pennsylvania.

Harold Walker, III, Manager of Financial Studies, will assist Connie on the Marginal Cost Study. Mr. Walker joined the firm in 1996 and has over 36 years of experience conducting "fair rate of return" studies for regulated utilities. He also supervises and develops financial and economic studies on behalf of various investor- and municipality-owned utilities. He is located in the firm's Valley Forge office.

Connie and Harold will also be assisted by Greg R. Herbert, Rate Analyst. Greg joined our firm in 2017 and has experience with bill analyses, revenue requirement and water and wastewater tap-in fee studies. He is also located in our Valley Forge office.

Paul R. Herbert, Senior Consultant, will also be advising on the project from our Camp Hill, Pennsylvania Office. Paul has over 44 years of experience in the many facets of cost of service.

Resumes of these key personnel are located on pages 13 through 23 of this proposal.

Our firm has performed cost of service and rate design studies for the following clients (among others), most of whom are repeat clients:

COST OF SERVICE AND RATE DESIGN STUDIES

<u>Client</u>	<u>State</u>
Philadelphia Gas Works	Pennsylvania
UGI Corporation	Pennsylvania
Essential Utilities (Aqua PA)	Pennsylvania
Aqua Ohio, Inc.	Ohio
City of Bethlehem	Pennsylvania
City of Lancaster	Pennsylvania
City of DuBois	Pennsylvania
Borough of Hanover	Pennsylvania
Chester Water Authority	Pennsylvania
Borough of Carlisle	Pennsylvania
The York Water Company	Pennsylvania
Bradford City Water Authority	Pennsylvania
Bradford Sanitary Authority	Pennsylvania
Meadville Area Water Authority	Pennsylvania
Borough of Ephrata	Pennsylvania
United Water Pennsylvania (now SUEZ)	Pennsylvania
Frankfort Electric and Water Plant Board	Kentucky
Northern Kentucky Water District	Kentucky
Kentucky American Water Company	Kentucky
Water Service Corporation	Kentucky
Missouri American Water Company	Missouri
Illinois American Water Company	Illinois
Aqua Illinois, Inc	Illinois
Indiana American Water	Indiana
Iowa American Water Company	Iowa
EPCOR Water	Arizona
Aqua Virginia, Inc	Virginia
West Virginia American Water Company	West Virginia
New Jersey American Water Company	New Jersey
Tennessee American Water Company	Tennessee
United Water Connecticut (now SUEZ)	Connecticut
United Water Idaho (now SUEZ)	Idaho
SUEZ Water New York Inc.	New York

TECHNICAL SPECIALTIES

- Financial Modeling
- Financial Analysis
- Revenue Requirements
- Cost of Service Allocation and Rate Design

PERSONAL INFORMATION

- B.A., Economics, University of Virginia, 1983
- MSIA, Carnegie Mellon University, Tepper School of Business, 1986
- Professional Member: AWWA, PMAA, NAWC
- Certifications: Registered Municipal Advisor Principal, Project Management Professional

EXPERIENCE

Ms. Heppenstall is located in the Valley Forge, Pennsylvania, office and joined the firm in August 2006. As Senior Project Manager for Rate Studies of Gannett Fleming Valuation and Rate Consultants, LLC, she is responsible for the review and analysis of utility accounting and operating data; development of cost of service allocation, rate design and bill analysis computer models; development of databases of client capital and operating costs; and the preparation and presentation of the results of studies performed for various utility clients. Ms. Heppenstall also has presented expert testimony before the Pennsylvania, Arizona, Kentucky, Virginia, West Virginia, Indiana, Hawaii, California and Missouri regulatory commissions.

Prior to joining Gannett Fleming, Ms. Heppenstall was employed by various underwriting firms in the municipal bond industry. During her 16-year career in municipal finance, she was involved in all facets of municipal bond issuance, including financial modeling and credit analysis for all client.

Several representative assignments include:

- **Philadelphia Gas Works, Philadelphia, PA:** Ms. Heppenstall's assignment included the preparation of numerous exhibits and testimony in response to the Pennsylvania Public Utility Commission's natural gas rate filing requirement. The cost of service allocation study included the allocation of pro forma costs of service to the customer classifications based on the Average and Excess Method. She prepared testimony and exhibits and responded to data requests throughout the rate case.
- **San Jose Water Company, San Jose, California:** Ms. Heppenstall's task was to design a proposed rate structure that minimizes the Company's balances in the State of California's Water Revenue Adjustment Mechanism (WRAM). The WRAM is a decoupling mechanism that is designed to ensure that the Company receives its allowable revenue in a water conservation environment. However, the revenue received from WRAM program lags behind the collection of revenues due to water sales. Therefore, the Company's rate design goals were to minimize any WRAM volumes. Ms. Heppenstall provided a sound rate structure that should minimize the Company's WRAM balances in the future.

- **Pennsylvania American Water, Mechanicsburg, Pennsylvania:** Ms. Heppenstall's assignment included the preparation of numerous exhibits in response to the Commission's rate filing requirements for both water and sewer rate filings. The cost of service allocation studies included the allocation of pro forma costs of service to the customer classifications for the various divisions of the Company. A computer rate model was used to move today a uniform rate structure to recover the total cost of service incorporating the results of the cost allocation study. In addition, Ms. Heppenstall calculated special rates to incorporate interruptible, curtailment and standby customers.
- **EPCOR Water Arizona, Inc., Phoenix, Arizona:** Ms. Heppenstall worked with the Company to develop multiple cost of service studies and incorporate a consolidated rate design. The study included water conservation rates for large water users in the service areas. Her duties included the preparation of numerous exhibits in response to the Commission's rate filing requirements. The cost of service allocation studies included the allocation of pro forma costs of service to the customer classifications for each rate area. A computer rate model was used to design a uniform rate structure to recover the total cost of service incorporating the results of the cost allocation study.
- **City of Lancaster - Bureau of Water, Lancaster, Pennsylvania:** Ms. Heppenstall's assignment included the preparation of numerous exhibits in response to the Commission's rate filing requirements for both water and sewer rate filings. Revenue requirements were projected for the future test year using pro forma adjustments to revenues, expenses and rate base. Pro forma statements of income were prepared under present and proposed rates. The cost of service allocation study included the allocation of pro forma costs of service to the customer classifications located inside and outside the City. A computer rate model was used to design a uniform rate structure to recover the total cost of service incorporating the results of the cost allocation study.

Ms. Heppenstall's technical education has included a formal instructional program offered by the National Association of Regulatory Utility Commissioner (NARUC) and The Institute of Public Utilities, Michigan State University. She attended the NARUC Utility Rate School in May 2007. In addition, Ms. Heppenstall is a certified as a Project Management Professional (PMP) and Registered Municipal Advisor Principal.

TECHNICAL SPECIALTIES

- Public Utility Revenue Requirements
- Public Utility Cost of Service Allocation
- Public Utility Rate Design

PERSONAL INFORMATION

- B.S., Finance, The Pennsylvania State University, 1975
- Member: AWWA, PMAA, NAWC

EXPERIENCE

Mr. Herbert is a Senior Consultant located in the Camp Hill, Pennsylvania, office and joined the firm in 1977. He is responsible for the direct supervision of rate study assignments including the development of revenue requirements, allocation of cost of service to customer classifications and the design of customer rate schedules. His assignments include analyzing operating and accounting data, preparing pro forma statements of income, developing allocation factors, allocating costs to various classes of service, designing customer rates using customer bill analyses and preparing written reports. Mr. Herbert also has presented expert testimony before the Kentucky, Pennsylvania, Ohio, West Virginia, New Jersey, and eleven other state regulatory commissions. Several representative assignments include:

- **UGI Gas Utilities, Inc. – Combined Gas Divisions:** In 2019, the Company requested a cost of service allocation study for each of the Company's North, South and Central tariff areas of Pennsylvania and a study for the merged gas operations state-wide. The cost of service allocation studies included the allocation of the fully projected future test year pro forma revenue requirements. The allocation was based on the Average and Excess Demand Method as described in Gas Rate Fundamentals. The rates for each classification were designed to produce rates of return by class that moved toward the system average rate of return. This method was approved by the Pennsylvania Public Utility Commission (PUC) in prior cases. The average and excess method apportions costs based on the average use and the use in excess of average to meet maximum system demands. This apportionment was based on the system load factor. The allocation of the average portion of system capacity was allocated to classifications based on average daily usage. The excess capacity portion was allocated to service classifications based on the non-coincident peak demands using single peak day demands, three-day peak demands and any additional load study data. The allocation of distribution system costs considered the use of a small mains adjustment or a minimum system requirement. The rate design also incorporated consideration of cost studies in support of customer charges, demand charges and transportation and sales volumetric rates. The following rate proceeding in 2020, the Company had requested a cost of service allocation study only for the merged gas operations state-wide as the 2019 proceeding consolidated rates across the North, South and Central tariff areas.

- **UGI Gas Utilities, Inc. – Penn Natural Gas Division:** The cost-of-service allocation study included the allocation of pro forma revenue requirements for the future test year for the Company's 2008 rate case. The allocation was based on the Average and Excess Demand Method as described in Gas Rate Fundamentals. This method was approved by the Pennsylvania Public Utility Commission (PUC) in prior cases. The average and excess method apportions costs based on the average use and the use in excess of average to meet maximum system demands. This apportionment was based on the system load factor. The allocation of the average portion of system capacity was allocated to classifications based on average daily usage. The excess capacity portion was allocated to service classifications based on the non-coincident peak demands using single peak day demands, three-day peak demands and any additional load study data. The allocation of distribution system costs considered the use of a small mains adjustment or a minimum system requirement. The rates for each classification were designed to produce rates of return by class that moved toward the system average rate of return. The rate design also incorporated consideration of cost studies in support of customer charges, demand charges and transportation and sales volumetric rates.
- **UGI Gas Utilities, Inc. – Central Penn Gas Division:** The cost of service allocation study included the allocation of pro forma revenue requirements for the future test year for the Company's 2008 and 2011 rate cases. The allocation was based on the Average and Excess Demand Method as described in Gas Rate Fundamentals. This method was approved by the Pennsylvania Public Utility Commission (PUC) in prior cases. The average and excess method apportions costs based on the average use and the use in excess of average to meet maximum system demands. This apportionment was based on the system load factor. The allocation of the average portion of system capacity was allocated to classifications based on average daily usage. The excess capacity portion was allocated to service classifications based on the non-coincident peak demands using single peak day demands, three-day peak demands and any additional load study data. The rates for each classification were designed to produce rates of return by class that moved toward the system average rate of return. The rate design also incorporated consideration of cost studies in support of customer charges, demand charges and transportation and sales volumetric rates.
- **T.W. Phillips Gas and Oil Co.:** The study included an analysis of cost of service allocation to the several rate classifications and transportation customers. The study was based on recognized methods and procedures for developing allocation factors to determine the rate of return for each classification. The rate design considered the results of the cost allocation study, industry trends and competitive factors. Mr. Herbert prepared direct testimony in support of the cost of service exhibit and responded to data requests from other parties.
- **Kentucky American Water Company:** The study allocated cost of service to cost functions and customer classifications using the base-extra capacity method. Cost allocation factors were developed based on each classification's use of the water system. The development of a common rate structure included the design of a computer rate model which was used to test alternative rate structures. Testimony was presented to the Kentucky PSC.

- **Frankfort Electric and Water Plant Board:** The Plant Board requested cost of service studies in order to file for a rate increase for their regulated wholesale customers as well as to determine the level of rates for non-regulated customers. The rates were designed to move the proposed level of revenues toward the indicated cost of service for each classification. The study was summarized in an exhibit. Testimony was presented to the Kentucky PSC regarding the rates charged to the wholesale customers.
- **City of Bethlehem - Bureau of Water:** Mr. Herbert was responsible for the revenue requirement and rate structure sections of the City's 1994, 1995, 1997 and 1998 rate filings with the Pennsylvania Public Utility Commission. The assignments included the preparation of direct testimony and numerous exhibits in response to the Commission's rate filing requirements. Revenue requirements were projected for the future test year using pro forma adjustments to revenues, expenses and rate base. Pro forma statements of income were prepared under present and proposed rates. The cost of service allocation study included the allocation of pro forma costs of service to the customer classifications located inside and outside the City. A computer rate model was used to design a uniform rate structure to recover the total cost of service incorporating the results of the cost allocation study.
- **New Jersey-American Water Company:** The study allocated cost of service to cost functions and customer classifications using the base-extra capacity method. A single cost of service analysis was performed for the Company's three service areas combined. Cost allocation factors were developed based on each classification's use of the water system. The development of a common rate structure included the design of a computer rate model which was used to test alternative rate structures.
- **The York Water Company:** The study included the allocation of cost of service to customer classifications within the gravity and repumped service areas. Allocation factors were prepared, as well as the customer bill analysis. Several proposed rate design alternatives using a computer rate model were developed for Company management which involved restructuring the minimum charges and rate blocks.
- **Aqua Pennsylvania, Inc.:** Mr. Herbert was responsible for the original study which included cost allocation to the several customer classifications based on considerations of quantity of water consumed, variability of rate of flow, and costs associated with metering, billing, and accounting; and modifying the existing rate structure to provide revenues from the several customer classifications more reasonably commensurate with the costs associated with service those classifications. The base-extra capacity method was used to allocate the costs. The primary customer classifications were residential, commercial, industrial, other utilities, public fire protection, and private fire protection. The rate design study included preparing proof of revenue statements by applying the present and proposed rates to the detailed bill analysis, using a computer rate model.

Mr. Herbert's continuing education has included several instructional programs related to cost analysis including the National Association of Regulatory Utility Commissioner's Seminar on Water Regulation hosted by the University of South Florida, "Financial Planning for Wastewater Treatment Systems" sponsored by the University of

PAUL R. HERBERT

Wisconsin, "Concepts of Service Cost Studies" sponsored by the United States Telephone Association, and AGA Advanced Regulatory Seminar sponsored by the American Gas Association and the University of Maryland.

From 1975 to 1977, Mr. Herbert worked for Herbert Associates, Inc., Consulting Engineers, as a Field Office Manager for a large sewer collection system construction project; and from 1972 to 1974, he worked part time for the United Telephone System, Eastern Group, in the plant accounting department.

TECHNICAL SPECIALTIES

- Cost of Capital Studies for Fair Rate of Return
- Financial Analysis
- Economic Valuation
- Financial Benchmark Analysis

PERSONAL INFORMATION

- B.S., Finance, The Pennsylvania State University, 1984
- Certified Rate of Return Analyst (CRRRA)
- Former President and former Board of Directors, Society of Utility and Regulatory Financial Analysts (SURFA)
- Pennsylvania Municipal Authorities Association, Electric Deregulation Committee
- Member: PMAA, National Association of Water Companies (NAWC) and SURFA
- Licensed Municipal Advisor Representative (Series 50) by Municipal Securities Rulemaking Board (MSRB) and Financial Industry Regulatory Authority (FINRA).

EXPERIENCE

Mr. Walker is Manager, Financial Studies located in the Valley Forge, Pennsylvania, office and joined the firm in 1996. He supervises and develops financial and economic studies on behalf of investor-owned and municipally owned water, wastewater, electric, natural gas distribution and transmission, oil pipeline, and telephone utilities, as well as resource recovery companies. He provides clients with financial decision studies for capital budgeting purposes and develops financial models for determining future capital requirements. Mr. Walker valued utility property, and common stock for acquisition and divestiture and he assists in both the public and private placement of fixed capital securities.

Mr. Walker has presented expert testimony on over 130 occasions on various topics before regulatory commissions and courts in 26 states including: Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Idaho, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, Nevada, New Jersey, New York, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia. His testimonies covered various subjects including: fair market value, the taking of natural resources, appropriate capital structure and fixed capital cost rates, depreciation, fair rate of return, purchased water adjustments, synchronization of interest charges for income tax purposes, valuation, cash working capital, lead-lag studies, financial analyses of investment alternatives, benchmarking and fair value.

Some of Mr. Walker's recent assignments include:

- **Reproduction or Replacement Cost New (RCN) Analysis of Tangible Assets Being Condemned, Merrimack, NH, Baker Donelson Bearman.** Project Manager responsible for the RCN valuation of tangible water system assets on behalf of the company. The assets of Pennichuck Water Works, Inc. (Pennichuck), located in Nashua and 10 surrounding New Hampshire municipalities, were being condemned by the City of

Nashua. Pennichuck requires consulting services (RCN analysis) to assist another outside consultant in completing a replacement cost new less depreciation analysis of Pennichuck's assets being condemned. The required RCN analysis was based primarily upon a replacement cost analysis. For certain aboveground assets, the RCN analysis can be based upon a reproduction cost analysis. The other outside consultant served as the coordinator of the RCN analysis so that he could testify as to how it was put together and the results. The major assets that comprise the RCN analysis included four dams; a raw water intake, pumping facility, and transmission mains commencing at the Merrimack River to a supply pond; a 35 mgd Infilco Degremont treatment plant; 11 water storage reservoirs having a total storage capacity of 20.7 Mgal; a 900,000 gpd gravel-packed well; approximately 420 miles of transmission and distribution mains; approximately 24,000 service connections; approximately 2,300 hydrants; approximately 45 booster stations; and approximately 15 water tanks.

- **Cost of Water Service**, Jackson, NJ, Jackson Township Municipal Utilities Authority (MUA). Manager of Financial Studies responsible for the analysis of the estimated rate increase per customer that resulted from the proposed water and sewer expansion to service new housing developments. The analysis allocated MUA's share costs (debt service, electrical cost, and chemical costs) both on a consumption basis and on an estimated-cost-of-service basis. The analysis presented five scenarios of various sharings of project construction costs, ranging from new customers shouldering 100 percent to the MUA shouldering 100 percent.
- **Pennichuck Water Works, Inc.** Expert Witness involved in determining the appropriate cost of capital and fair rate of return for the Company. Due to the lack of appropriate market data concerning the Company, comparable groups of companies with actively traded stocks were used to estimate the Company's equity cost rate. Several financial models were used to derive the fund equity cost rate, including discounted cash flow, risk premium, and the capital asset pricing model. Testimony before the New Hampshire Public Utilities Commission was presented.
- **Philadelphia Gas Works:** Expert Witness responsible for measuring the financial performance of Philadelphia Gas Works (PGW) from 2014 through 2018, via benchmarks, and compare those results to peer companies. The period reviewed includes the years since PGW's last rate case to the most recent year for which comparable financial data exists. The benchmark study also reviewed forecasted benchmarking metrics of PGW's financial performance that were estimated reflecting the proposed rate increase.
- **NJ Natural Gas Company - Lead-Lag Studies**, Wall Township, NJ, New Jersey Natural Gas Company. Expert witness responsible for determining the appropriate cash working capital allowance that the Company should be afforded an opportunity to earn on as part of its rate base claim. The recommendation was based upon the results of a lead-lag study and net assets and liabilities analyses. The lead-lag study determined the level of funding required to operate on a day-to-day basis in providing for the cost of service. This was measured by calculating the net lag between (1) the provision of the cost of service and the receipt of the revenue requirement from the Company's customers and (2) the receipt of goods and services by the Company for those cost of service items. The net lag was multiplied by the average daily cost of service or revenue

requirement to determine the working capital claim. The Company required a separate cash working capital determination their electric and for their gas distribution operations.

- **Economic Valuation for Use of Government-Supported Debt Refinancing,** Zanesville, OH, Gasco Distribution Systems, Inc. Senior Financial Analyst responsible for the economic valuation of a private gas system on behalf of the company. Gasco Distribution Systems, Inc., owns and operates assets in Pennsylvania, Tennessee, Kentucky, and Ohio. The company's primary lines of business include ownership and operation of local natural-gas distribution companies, ownership and operation of natural-gas transmission pipelines, natural gas marketing, and ownership and operation of oil- and gas-producing properties. The valuation was required for the client to determine a fair value to support a debt refinancing. The valuation considered market conditions, rate regulation, and future capital costs. The valuation of the assets was estimated through the market approach, the income approach, and the selected-transactions approach.
- **PSEG Services Corp - Lead-Lag Studies,** Newark, NJ, Public Service Electric and Gas Company. Expert Witness responsible for providing 2017 lead-lag services to Public Service Electric and Gas Company (PSE&G) including being the expert witness accountable for determining the appropriate cash working capital allowance that the Company should be afforded an opportunity to earn on as part of its rate base claim. The recommendation was based upon the results of a lead-lag study. The lead-lag study determined the level of funding required to operate on a day-to-day basis in providing for the cost of service. This will be measured by calculating the net lag between (1) the provision of the cost of service and the receipt of the revenue requirement from the Company's customers and (2) the receipt of goods and services by the Company in providing for the cost of service and the payment by the Company for those cost of service items. The net lag was multiplied by the average daily cost of service or revenue requirement to determine the working capital claim. The Company required a separate cash working capital determination their electric and for their gas distribution operations.

Prior to joining Gannett Fleming, Mr. Walker was employed by AUS Consultants - Utility Services from 1985 to 1996. He held various positions during his eleven years with AUS, concluding his employment there as a Vice President. From 1993 to 1994, he became a contributing author for the Fortnightly, a utility trade journal. His column was the Financial News column and focused mainly on the natural gas industry.

Mr. Walker's technical education has included the completion of the regulation and ratemaking courses presented by the College of Business Administration and Economics Center for Public Utilities at New Mexico State University. He has also completed the Project Management and Continuous Quality Improvement Training, presented by Gannett Fleming, 1996 and the Project Manager Training course presented by The Pennsylvania State University Outreach Program, 2000-2001.

TECHNICAL SPECIALTIES

- Financial Analysis
- Bill Analysis
- Cost of Service Allocation and Rate Design
- Capital Charge Analysis

PERSONAL INFORMATION

- B.S., Economics, The Pennsylvania State University, 2009
- Member: AWWA, NAWC

EXPERIENCE

Mr. Herbert is located in the Valley Forge, Pennsylvania, office and joined the firm in May 2017. As a Rate Analyst of Gannett Fleming Valuation and Rate Consultants, LLC, he is responsible for the collection and analysis of utility accounting and operating data, as well as assisting the Project Manager with data entry of cost of service allocation, bill analysis, and rate design computer models. He also developed a computer model and a report of the results to utility clients for a Capital Charges Study.

Prior to joining Gannett Fleming, Mr. Herbert was employed by an investment managing firm for nonprofits, pensions, and private families. During his eight years in the investment finance sector, he developed client monthly and quarterly performance reports, and presented public and private fund research and financial analysis to clients.

Several representative assignments include:

- **Schuylkill County Municipal Authority, Pottsville, Pennsylvania:** The Authority requested a Capital Charges Study to calculate a tapping fee for new customers connecting to the water and sewer systems. The tapping fee is comprised of two parts: a Capacity Part and a Distribution Part. Mr. Herbert calculated the current unit cost of capacity related facilities that apply to the capacity requirements of the new customer, and the current unit cost of the distribution main serving the new customer. The capacity and distribution unit costs are each multiplied by the average daily household water. The sum of the Capacity Part and Distribution Part derive the tapping fee.
- **Aqua Pennsylvania, Inc., Bryn Mawr, Pennsylvania:** Mr. Herbert performed a bill analysis to determine the historic level of revenue derived from water and sewer rates. By examining each bill sent by the Company, water and sewer revenues, water consumption and sewer collection amounts were broken out by each customer class.

Then, a rate application was completed and organized by each water and sewer tariff, which encompassed all Aqua Pennsylvania customers.

- **Derry Township Municipal Authority, Hershey, Pennsylvania:** The Authority requested a Capital Charges Study to calculate a tapping fee for new customers connecting to the sewer system. The tapping fee is comprised of a Capacity Part and a Distribution Part. Mr. Herbert calculated the current unit cost of capacity related facilities that apply to the capacity requirements of the new customer, and the current unit cost of the distribution main serving the new customer. The capacity and distribution unit costs are each multiplied by the average daily household water. The sum of the Capacity Part and Distribution Part derive the tapping fee.
- **Newtown Artesian Water Company, Newtown, Pennsylvania:** Mr. Herbert performed a bill analysis to determine the historic level of revenue derived from water rates. By examining each bill sent by the Company, water revenues, water consumption amounts were broken out by each customer class. Then, a rate application was completed and organized by each water tariff, which encompassed all of Newtown Artesian Water customers. The studies required the allocation of the cost of service to the Company's customer classes and the development of revenue requirements and adjustments that Mr. Herbert helped develop for the Company.
- **City of Lancaster – Sewer Fund, Lancaster, Pennsylvania:** Mr. Herbert performed a bill analysis to determine the historic level of revenue derived from sewer rates. By examining each bill sent by the Company, sewer revenues, sewer collection amounts were broken out by each customer class. Then, a rate application was completed and organized by each sewer tariff, which encompassed all customers inside and outside the City. The studies required the allocation of the cost of service broken out by inside and outside City customer classes and the development of revenue requirements and adjustments that Mr. Herbert helped develop for the City.

COST ALLOCATION STUDIES FOR GAS UTILITIES

PHILADELPHIA GAS WORKS

Philadelphia, Pennsylvania

Philadelphia Gas Works (PGW) is the largest municipally owned gas utility in the country serving reliable natural gas to its 500,000 customers each year. The assignment for PGW was to prepare a cost allocation study (ACSS) for the Company's 2020 rate case that was submitted to the Pennsylvania Public Utility Commission.

Gannett Fleming conducted the cost allocation following the principles set forth in "Gas Rate Fundamentals" published by the American Gas Association's Rate Committee. The purpose of the study was to allocate PGW's revenue requirement or total cost of service to the various customer classes based on considerations of quantity of gas consumed; sales and transportation; demand characteristics; and costs associated with metering, billing and accounting. The allocation study used recognized procedures, the Average and Excess method, for allocating costs to customer classifications in proportion to each classification's use of the facilities, commodity and services which entail the total cost of providing gas.

Ms. Heppenstall provided testimony defending the cost allocation study in the 2020 rate case, calculation of customer surcharges and the pro forma rate of return for Technology and Economic Development Rider customers. She responded to data requests and aided in the settlement of the rate case.

COST ALLOCATION STUDIES OF GAS UTILITIES

UGI CORPORATION

UGI UTILITIES, INC.

Denver, Pennsylvania

UGI Utilities, Inc. (UGI) is a privately owned natural gas and electric utility in Pennsylvania and is a wholly owned subsidiary of UGI Corporation. UGI delivers reliable, safe and affordable energy to 700,000 customers in 45 counties of Pennsylvania and one county in Maryland. The assignments for UGI have been to prepare cost allocation studies and rate designs for rate cases that have been submitted to the Pennsylvania Public Utility Commission.

UGI has been a legacy client and Gannett Fleming has conducted cost allocation and rate design studies for its formerly known services area divisions of Pennsylvania (UGI Central, North and South Divisions). For the most recent study, Gannett Fleming conducted the cost allocation of the revenue requirements for the fully projected future test year ended September 30, 2021 for the UGI merged gas operations state-wide. The allocation was based on the Average and Excess Demand Method in “Gas Rate Fundamentals” published by the American Gas Association’s Rate Committee. The average and excess method apportions costs based on the average use and the use greater than average to meet maximum system demands. The apportionment was based on the system load factor. The allocation of distribution costs used the Company’s direct assignment analysis, and other methods of cost allocation were discussed and analyzed with Company management. Customer costs were allocated based on the cost of meters, services and regulators by classification, the number of customers and bills, and the facilities required to read meters.

Allocation factors were developed through a customizable Excel workbook model to allocate each element of the cost of service to the several sales and distribution service rate classifications. Gannett Fleming worked closely with Company management to determine the most appropriate methods of allocation for the commodity, demand and customer components of the system. The results of the allocation studies determined the relative rate of return for each rate schedule under present and proposed rates and provide for a fair and defensible rate structure.

Gannett Fleming provided testimony defending the cost allocation study in the 2020 rate case, calculation of customer surcharges.

COST ALLOCATION STUDY FOR WATER AND WASTEWATER UTILITIES

PENNSYLVANIA AMERICAN WATER COMPANY

Mechanicsburg, Pennsylvania

Gannett Fleming aided Pennsylvania American Water Company in the development and litigation of their 2020 Rate Case before the Pennsylvania Public Utility Commission. Pennsylvania American Water is the largest investor owned water utility in the Commonwealth of Pennsylvania. The Company services approximately 2.4 million people.

The cost of service allocation and rate design studies for water and wastewater included the allocation of the pro forma revenue requirements for the fully projected future test year as of December 31, 2021, the application of present and proposed rates to an analysis for the historic test year consumption as of December 31, 2019 provided by the Company, consultations with Company management related to alternate rate forms and structures, and the design of proposed rates based on the current rate structure, the results of the cost allocation study, and the discussions with management.

The water cost of service allocation was based on the base-extra capacity method. The cost of service by account is allocated to customer classes based on the extent to which each class uses the commodity, facilities, and services of the Company. The wastewater cost of service allocation will be based on the methods and procedures described in the Water Environment Federation (WEF) Manual of Practice No. 27.

Present and proposed rates were applied to a consumption analysis provided by the Company. Gannett Fleming adjusted the consumption analysis to reflect the pro forma revenue adjustments developed by the Company. Gannett Fleming applied the present rates in effect to the analysis as a test of its accuracy. Present and proposed rates were applied to the consumption to quantify their impact on per books revenues. The design of proposed rates considered the Company's goals and objectives, recent legislation, industry trends, the current rate structure, and the results of the cost allocations. Ms. Heppenstall also calculated rates included in the Company's tariff in order to serve curtailment, standby and interruptible customers.

Exhibits and direct testimony setting forth the results of the studies were prepared by Ms. Heppenstall in a form suitable for filing with the Pennsylvania Public Utility Commission. The exhibits and direct testimony were prepared in consultation with Company management and rate counsel. During the litigation period following the rate filing, Gannett Fleming responded to data requests and interrogatories related to the studies, prepared additional testimony and exhibits in support of the Company's position, reviewed the submissions of other parties and assisted in settlement discussions.

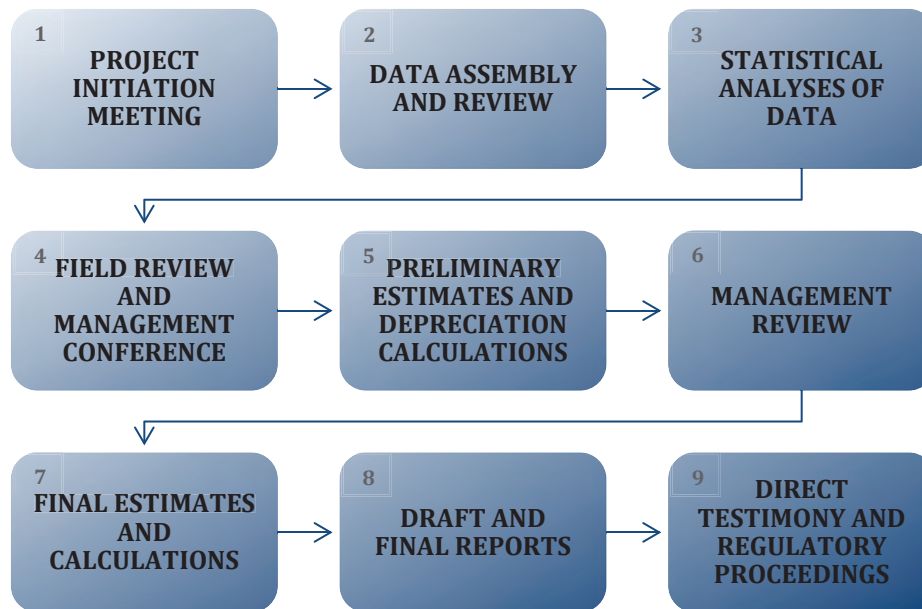
LIST OF REFERENCES

<div>[REDACTED]</div> <div>UGI Utilities, Inc. 1 UGI Drive Denver, PA 17517</div>
<div>[REDACTED]</div> <div>Philadelphia Gas Works 800 W. Montgomery Avenue Philadelphia, PA 19122</div>
<div>[REDACTED]</div> <div>American Water, Mid-Atlantic Division 852 Wesley Drive Mechanicsburg, PA 17055</div>

AREA 4: DEPRECIATION STUDY

PROJECT WORK PLAN

Gannett Fleming's depreciation studies consist of nine primary tasks, a brief narrative of which is provided below. The anticipated schedule for these tasks, which is based on an expectation that available data can be provided in May of 2021, is set forth in the Gantt chart at the end of this section. The project team will consist of Ned W. Allis as Project Manager; John J. Spanos as Project Principal; and analysts, assistant analysts and support staff. Resumes for the project team are provided on pages 42 through 48 of this proposal. Mr. Allis has previously served as project manager for depreciation studies for Fitchburg Gas and Electric Light Company and Unitil Energy Systems, Inc.



TASK 1. PROJECT INITIATION MEETING

Gannett Fleming will initiate the Northern Utilities, Inc. – NH Division, d/b/a Unitil (“Unitil” or “Company”) depreciation study with a meeting held via telephone conference to review the depreciation study objectives and plant accounting systems with Unitil management and accounting representatives. Additionally, we will review with management the various depreciation methods, procedures and techniques available for use in the study of Unitil’s gas plant.

During the initial discussions, Gannett Fleming will also review Unitil’s plant accounting system. The review will include samples of the engineering records, the continuing property records and the general ledger. Our purpose in this review will be to gain an improved understanding of the data available for study, its consistency with the

general ledger, the level of detail available for analysis and the accounting policies in effect during the period for which data are available.

Once our initial review has been completed, we will coordinate with Unitil personnel to determine the format in which the plant accounting data will be sent for input into our proprietary depreciation software programs. Gannett Fleming's experience performing hundreds of different utility depreciation studies has provided the capability to incorporate a wide range of file formats and historical databases into its studies.

TASK 2. DATA ASSEMBLY AND REVIEW

Once the plant accounting data have been compiled by Unitil team members and forwarded to Gannett Fleming, it will be scrutinized by the Gannett Fleming team. Given that the historical data form one of the primary bases of service life and net salvage estimates, the integrity of the data utilized for the analysis is one of the most important components of a depreciation study. Gannett Fleming's data review process includes the use of its own proprietary depreciation software which allows for a comprehensive review of any potential issues with the historical data. Potential data concerns might include items such as debit retirements, abnormal plant and reserve activity and underlying trends in the data. These areas of concern will be identified and presented to the Unitil team to determine their circumstances and whether they require adjustment or special handling in the study.

Based on these considerations, Gannett Fleming believes significant effort should be devoted to this task. The work performed to scrutinize, resolve and understand the data and any areas of concern provides increased validity of the service life and net salvage estimates and the best possible support for the study. It has been our experience that the effort levied during this phase of the study yields significant benefits in both the quality of the study and the ability to defend its results during regulatory proceedings.

TASK 3. STATISTICAL ANALYSES OF DATA

Gannett Fleming will analyze the data assembled during Task 2 for historical indications of service life and net salvage characteristics. Similar to the data assembly and review process, Gannett Fleming's proprietary depreciation software allows for a comprehensive analysis of historical data to determine life and net salvage indications and allows for the proper analysis of any available data set.

For those property groups where sufficient aged historical retirement data are available, the retirement rate method of analysis will be used to develop indications of service life. These analyses include:

- Trends in average service life and survivor curve shape will be identified through the use of experience and placement band analyses.
- Experience bands will identify the impact of economic and technological cycles on the service life of property groups.
- Placement bands will assist in identifying the relative impact of several forces of retirement throughout the life cycle of a group of installation years.

The selection of the bands will be based on a review of annual addition and retirement levels, trends in the data and preliminary discussions with operating management related to changes in materials used in construction, changes in installed technology and major retirement programs.

During this task, we will determine the availability of vintaged (or aged) data for all accounting years for which data are available. However, in the event sufficient aged data does not exist, annual gross plant additions and retirements will be used in accordance with the simulated plant record ("SPR") method of life analysis. The SPR method will produce, for each depreciable category, historical indications of service life. The gross annual retirements can also be statistically aged and the resultant simulated aged retirements can be combined with available aged data to be analyzed using the retirement rate method as described above.

Annual net salvage, gross salvage and cost of removal amounts will be expressed as a percent of annual retirements. Moving averages will be computed to smooth annual fluctuations and to analyze trends in the data.

Gannett Fleming routinely proposes amortization accounting for most general plant categories and will review and identify the general plant categories where it would be appropriate for Unitil to use amortization accounting.

TASK 4. FIELD REVIEW AND MANAGEMENT CONFERENCE

The analyses of historical data are just the beginning of the life and salvage estimation process. An understanding of the forces which caused the historical retirements and the extent to which such forces and others will cause future retirements will be obtained from discussions with Unitil management during field reviews and conferences.

We believe that the information obtained during these discussions is critical to determining, and defending, the proper service life and net salvage estimates for each plant account.

If feasible, the field review will include visits to the Company's major above-ground facilities, such as:

- measuring and regulating stations
- service centers
- office buildings

The purpose of the field inspections will be to obtain information related to the operation and condition of the property and to evaluate any unique operating conditions. If physical site visits are not feasible due to Covid-19 restrictions, we will work with Unitil to determine the best way to gain an understanding of the system and obtain information we would typically obtain on field reviews.

We will also meet with appropriate Company personnel to obtain additional information related to the outlook for the property. The results of the statistical analyses conducted in Task 3, comparisons to the typical range of lives used in the industry and our general experience will be reviewed as a basis for forecasting future survivor characteristics, gross salvage and cost of removal. The discussion will focus on the past forces of retirement which produced the historical indications of service life and net salvage and the extent to which future forces such as obsolescence, technology and environmental factors will be similar to or different from the past forces.

TASK 5. PRELIMINARY ESTIMATES AND DEPRECIATION CALCULATIONS

The results of the statistical analyses performed during Task 3 will be combined with information obtained during Task 4 and our knowledge of the service life and net salvage estimates for other utilities to arrive at judgments of average service life, survivor curve and net salvage percent for each depreciable property group. The synthesis of historical indications and outlook requires judgment based on experience and knowledge of industry trends and precedent.

Annual depreciation accrual rates will be calculated by property group based on the estimated survivor curves and net salvage percents for plant in service as of December 31, 2020. Gannett Fleming's proprietary software allows for the versatility of performing the proper calculations under any depreciation scenario. Various scenarios might include combinations of several group depreciation procedures (average life group and equal life

group) and techniques (whole life and remaining life). The calculated accrued depreciation or “theoretical reserve” also will be calculated for comparison to the book reserve. The appropriateness and desirability of reallocating the book reserve will also be examined during this task.

TASK 6. MANAGEMENT REVIEW

The results of the depreciation calculations and the bases for such calculations will be reviewed with management to ensure that the results are in accordance with management’s capital recovery policies and outlook. Subsequent to the review, draft and final reports suitable for filing with the New Hampshire Public Utilities Commission will be prepared.

TASK 7. FINAL ESTIMATES AND CALCULATIONS

Final calculations of depreciation accrual rates and accrued depreciation by property group will be performed in order to reflect appropriate modifications as determined during the review with management.

TASK 8. DRAFT AND FINAL REPORTS

Gannett Fleming will draft a report for Unital setting forth the results of the study. The report will include a description of the methods used in the study, the depreciation calculations for each property group and the statistical analysis supporting the service life and net salvage estimates. The draft report will be submitted in either paper or electronic format to Company management for comments. The final report reflecting comments received from Unital will be prepared and forwarded in electronic format in anticipation of a July 30, 2021 filing date. Our report will consist of the following sections:

- Part I. Introduction
- Part II. Estimation of Survivor Curves
- Part III. Service Life Considerations
- Part IV. Net Salvage Considerations
- Part V. Calculation of Annual and Accrued Depreciation
- Part VI. Results of Study
- Part VII. Service Life Statistics
- Part VIII. Net Salvage Statistics
- Part IX. Detailed Depreciation Calculations

TASK 9. DIRECT TESTIMONY AND REGULATORY PROCEEDINGS

Gannett Fleming will provide direct testimony supporting the depreciation study in a format suitable for filing with the New Hampshire Public Utilities Commission.

The defense of the depreciation study in regulatory proceedings is just as critical as the execution of the study itself. The experience of Gannett Fleming's team provides an unparalleled knowledge and understanding of the issues and concerns that can arise in such a proceeding. In the past five years alone, Gannett Fleming has conducted depreciation services for over 100 regulatory proceedings and has submitted testimony and successfully argued many contested depreciation issues, including:

- Methods of accruing for net salvage
- Theoretical Reserve
- Equal Life Group Depreciation
- Life Spans of Generating Stations
- Service life estimates
- Net salvage estimates
- Depreciation technique (whole life or remaining life)
- Terminal and interim retirements and net salvage

Gannett Fleming will support the depreciation study throughout the regulatory process responding to depreciation-related information requests and providing expert testimony in a regulatory hearing.

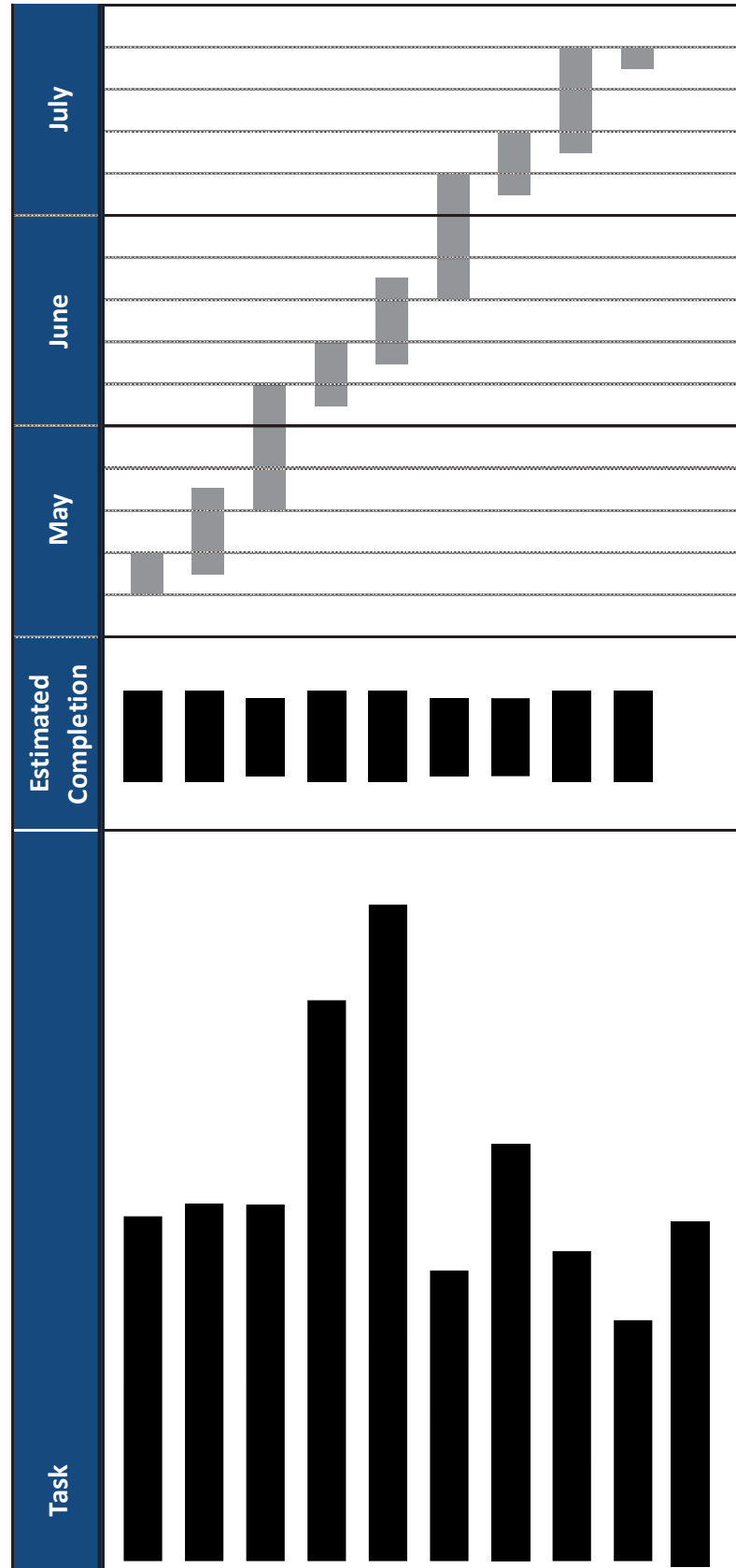
Our proposal to complete the rate case filing, including the preparation of direct testimony, is an amount not to exceed [REDACTED]. This estimate is provided in the Estimates of Cost – Project Price Sheets section of this proposal.

The workload associated with the regulatory process varies significantly from one proceeding to another; thus, it is difficult to estimate the effort associated with responding to information requests and actual attendance at hearings. We have not developed an estimate of the hours required for this task; and, as such, this task has not been included in the calculation of our compensation. Gannett Fleming's charge for work subsequent to the submission of the report and direct testimony to Unitil is determined on an hourly (time-and-materials) basis based on the current billing rates in effect when the work is performed. A schedule setting forth Gannett Fleming's billing rates is included in the Estimates of Cost - Project Price Sheets section of this proposal.

NORTHERN UTILITIES, INC. - NH DIVISION d/b/a UNITIL

AREA 4: DEPRECIATION STUDY

PROPOSED WORK SCHEDULE



* To be determined upon completion of study

QUALIFICATIONS AND EXPERIENCE

Gannett Fleming Valuation and Rate Consultants, LLC (Gannett Fleming) has achieved international prominence in the field of Depreciation Studies. Our staff has completed and defended depreciation studies in almost every U.S. state and before the Federal Energy Regulatory Commission. We have emerged as the source to turn to when clients need informed judgment that assures the timely recovery of capital investment.

The experience of Gannett Fleming's professional staff relates specifically to the capital recovery concerns of most regulated utilities and provides a basis for advising clients as to the methods of depreciation or service life and salvage analysis to be applied in a particular circumstance. The breadth of services offered by Gannett Fleming provides the capability of tapping into the expertise of our parent company's engineering divisions. This provides our clients the assurance that we understand all facets of their assets and related emerging issues.

The diversity of our skilled staff includes professionals in depreciation, accounting, statistical and actuarial methods, engineering, valuation, finance, mathematical theory and computer systems and programming. Our approach to conducting depreciation studies leverages these skills to consider all appropriate factors that are pertinent to the estimation of service life and net salvage. The experience of our staff ensures statistical analyses of the past and outlook for the future are properly incorporated. Management's capital recovery philosophy is reflected in the selections of appropriate procedures and techniques for calculating depreciation expense and for measuring the adequacy of book reserves.

Depreciation services provided for regulated public utilities and railroads typically include the following:

- Expert testimony in support of depreciation studies during rate hearings
- Book depreciation reserve studies for the purpose of establishing a starting point for the use of the book reserve, or adjusted book reserve, for ratemaking purposes
- Service life and net salvage studies in support of book depreciation rates
- Drafting petitions and stipulations to document the agreements reached with the Commission staff and other parties
- Periodic re-computation of depreciation rates based on remaining life, equal life group, and life span procedures for book purposes

Informed judgment based on the consideration of all relevant factors results in proper estimates of service life and salvage for capital recovery purposes. Such judgment is the synthesis of the application of modern statistical techniques, including actuarial methods, to analyze known factors of the past; knowledge of the character, use, and location of the property; the observed features at the time of visual inspection; the anticipated events in the future, including the plans of management for the foreseeable future; and a general knowledge of similar property.

Gannett Fleming personnel have a complete working knowledge of depreciation methods, procedures and techniques that reduce the risk of incomplete capital recovery. In its studies, rates for capital recovery for large unit facilities are designed through the use of the life span technique, utilizing scheduled or estimated retirement dates, and the use of a remaining life basis. In its studies for mass utility plant, Gannett Fleming encourages the institution of the equal life group procedure (ELG), on a go-forward basis, in conjunction with either a remaining life basis or a whole life with true up basis.

During its more than fifty years of experience using computing technology for depreciation studies, Gannett Fleming has developed extensive software for service life and salvage analyses and the calculation of depreciation by a wide variety of methods and procedures. Our software, combined with our staff's skills and experience, gives us the ability to provide professional services that meet the specific requirements of clients on time and within budget.

The following table contains a list of clients for whom Gannett Fleming has conducted depreciation studies in recent years.

**DEPRECIATION STUDIES PERFORMED
BY GANNETT FLEMING**

State	Client	Type of Utility	Year of Initial Study	Orig. Cost Recent Study (mil \$)	Studies by GF
Colorado	Black Hills Colorado Gas Co.	Gas	2012	108	1
Connecticut	Connecticut Natural Gas	Gas	2017	856	1
Connecticut	Southern Connecticut Gas	Gas	2017	861	1
Connecticut	Yankee Gas Services Co.	Gas	2017	1,817	1
Georgia	NICOR Gas Co.	Gas	2012	4,891	1
Illinois	Atmos Energy (IL)	Gas	2010	49	1
Illinois	Integrays - North Shore Gas Co.	Gas	2000	375	3
Illinois	Integrays - Peoples Gas, Light & Coke Co.	Gas	2000	2,378	3
Indiana	Northern Indiana Public Service Co.	Gas	2007	1,889	2
Iowa	MidAmerican Energy Co.	Gas	2004	1,218	2
Kansas	Atmos Energy Corporation	Gas	2018	370	1
Kentucky	Columbia Gas of Kentucky	Gas	2001	318	4
Kentucky	Duke Energy Kentucky	Gas	1990	355	4
Louisiana	CenterPoint Energy Field Services	Gas	2008	641	1
Maryland	Columbia Gas of Maryland	Gas	1995	100	2
Maryland	Dominion Cove Point	Gas	2005	755	2
Maryland	Elkton Gas	Gas	2006	9	1
Massachusetts	Boston Gas Company	Gas	2020	5,765	1
Massachusetts	Columbia Gas of Massachusetts	Gas	2011	1,005	1
Massachusetts	Fitchburg Gas and Electric	Gas	2018	152	1
Massachusetts	NSTAR Gas	Gas	2007	940	2
Minnesota	Peoples Natural Gas & Northern MN Util.	Gas	2011	341	1
Minnesota	CenterPoint Energy Minnesota Gas	Gas	2017	2,222	1
Missouri	Ameren Missouri	Gas	2005	348	2
Missouri	Atmos Energy (MO)	Gas	2010	106	1
Missouri	Laclede Gas Co.	Gas	2003	1,415	3
Nebraska	Black Hills Nebraska	Gas	2019	742	1
Nevada	Sierra Pacific Power Company	Gas	2004	386	3
Nevada	Southwest Gas	Gas	2006	1,353	1
North Carolina	North Carolina, Public Service Co. of	Gas	2005	1,289	2
Ohio	Columbia Gas of Ohio	Gas	2003	1,761	2
Ohio	Dominion East Ohio Gas	Gas	2001	1,911	2
Ohio	Duke Energy Ohio	Gas	1990	1,481	5
Oregon	Northwest Natural Gas	Gas	2005	2,291	2
Pennsylvania	Columbia Gas of Pennsylvania	Gas	1973	1,137	15
Pennsylvania	Equitable Gas Co.	Gas	1992	916	5
Pennsylvania	National Fuel Gas Distribution Corp.	Gas	1975	492	12
Pennsylvania	National Fuel Gas Supply Corp.	Gas	1977	826	3
Pennsylvania	Peoples Natural Gas	Gas	1980	1,207	16
Pennsylvania	Phillips Gas and Oil Co., T. W.	Gas	1981	249	15
Pennsylvania	PPL Gas Utilities	Gas	1992	5,177	4
Pennsylvania	UGI - Central Penn Gas, Inc.	Gas	1953	379	8
Pennsylvania	UGI - Penn Natural Gas	Gas	2010	573	1
Pennsylvania	UGI Utilities, Inc. - Gas Division	Gas	1957	1,096	10
Rhode Island	Narragansett Electric Company	Gas	2016	1,098	1

**DEPRECIATION STUDIES PERFORMED
BY GANNETT FLEMING**

State	Client	Type of Utility	Year of Initial Study	Orig. Cost Recent Study (mil \$)	Studies by GF
South Carolina	Carolina Gas Transmission Corp.	Gas	2009	286	1
South Carolina	South Carolina Gas & Electric Co.	Gas	2003	693	2
Utah	Questar Gas Co.	Gas	2002	1,877	3
Virginia	AGL Resources - Virginia Natural Gas	Gas	1997	1,000	4
Virginia	Columbia Gas of Virginia	Gas	1997	647	3
West Virginia	Dominion Hope Gas	Gas	1996	255	3
California	Pacific Gas and Electric	Elec/Gas	2003	56,164	4
Illinois	Ameren Illinois Co.	Elec/Gas	2006	7,938	2
Indiana	Citizens Energy Group	Elec/Gas	1996	908	3
Kentucky	Louisville Gas and Electric	Elec/Gas	2006	703	2
New York	Central Hudson Gas and Electric	Elec/Gas	2004	1,164	2
New York	Consolidated Edison Company of NY	Elec/Gas	2014	37,234	2
New York	New York State Electric & Gas Corp.	Elec/Gas	2014	4,510	1
New York	Orange and Rockland Utilities	Elec/Gas	2013	1,969	2
New York	Rochester Gas and Electric Corporation	Elec/Gas	2014	2,710	1
Ohio	Duke Energy Ohio	Elec/Gas	1990	2,174	5
Washington	Avista Corp.	Elec/Gas	2004	3,599	3
Washington	Puget Sound Energy	Elec/Gas	2006	12,785	2
Wisconsin	Madison Gas and Electric Co.	Elec/Gas	2007	771	1
Alaska	Chugach Electric Association	Electric	1990	821	6
Arizona	Arizona Public Service Co.	Electric	1993	8,082	2
Arkansas	Entergy Arkansas	Electric	2008	7,240	1
California	Pacific Gas and Electric	Electric	2003	56,164	4
Colorado	Black Hills Colorado Electric Utility Co.	Electric	2010	348	1
Connecticut	Connecticut Light & Power	Electric	2013	4,910	1
Florida	Florida Power and Light Co.	Electric	2009	45,980	2
Florida	Orlando Utilities Commission	Electric	2011	1,026	1
Hawaii	Hawaii Electric Light Co., Inc.	Electric	2007	1,179	2
Hawaii	Hawaiian Electric Co., Inc.	Electric	2007	3,763	2
Hawaii	Maui Electric Co., Ltd.	Electric	2007	1,050	2
Idaho	Idaho Power Co.	Electric	2001	4,288	3
Illinois	Commonwealth Edison	Electric	2012	18,427	1
Indiana	Duke Energy Indiana	Electric	1998	8,576	4
Indiana	Northern Indiana Public Service Co.	Electric	2007	5,073	2
Iowa	Alliant Energy - Iowa	Electric	2000	4,750	3
Iowa	MidAmerican Energy Co.	Electric	2005	10,998	3
Kansas	Kansas City Power & Light (KS)	Electric	2008	2,451	1
Kansas	Westar	Electric	2003	5,414	2
Kentucky	Duke Energy Kentucky	Electric	1990	1,268	4
Kentucky	East Kentucky Power Cooperative	Electric	2005	2,040	1
Kentucky	Jackson Energy Electric Cooperative	Electric	1999	165	2
Kentucky	Kentucky Utilities	Electric	2006	6,384	2
Kentucky	Owen Electric Cooperative, Inc.	Electric	1991	108	3
Louisiana	Entergy Gulf States	Electric	2008	6,198	1
Louisiana	Entergy Louisiana, Inc.	Electric	2008	6,686	1

**DEPRECIATION STUDIES PERFORMED
BY GANNETT FLEMING**

State	Client	Type of Utility	Year of Initial Study	Orig. Cost Recent Study (mil \$)	Studies by GF
Maine	Bangor Hydro Co.	Electric	2002	665	2
Maine	Central Maine Power Co.	Electric	2012	2,268	1
Maine	Maine Public Service Co.	Electric	2005	131	2
Maryland	Potomac Edison	Electric	2018	1,125	1
Massachusetts	Fitchburg Gas and Electric	Electric	2018	155	1
Massachusetts	NSTAR Electric	Electric	2013	5,208	2
Massachusetts	Western Massachusetts Electric Co.	Electric	2016	829	1
Michigan	ITC Holdings Corp.	Electric	2011	2,865	1
Minnesota	Alliant Energy - Minnesota	Electric	2000	194	3
Mississippi	Entergy Mississippi, Inc.	Electric	2008	2,951	1
Missouri	Ameren MO	Electric	2002	12,157	3
Missouri	Greater MO Opers. - L & P Jurisdiction	Electric	2008	427	1
Missouri	Greater MO Opers. - MPS Jurisdiction	Electric	2008	1,786	1
Missouri	Kansas City Power & Light (MO)	Electric	2008	2,451	1
Nebraska	Omaha Public Power District	Electric	1996	2,550	3
Nevada	Nevada Power Company	Electric	2002	8,073	3
Nevada	Sierra Pacific Power Company	Electric	2004	3,578	4
New Hampshire	Public Service Co. of New Hampshire	Electric	2018	2,160	1
New Hampshire	Unitil Energy Systems, Inc.	Electric	2020	381	1
New Jersey	Atlantic City Electric Co.	Electric	2017	2,315	3
New Jersey	Jersey Central Power and Light	Electric	2012	4,305	1
New Jersey	Rockland Electric Company	Electric	2016	318	1
New Mexico	El Paso Electric Company	Electric	2002	541	3
North Carolina	Duke Energy Carolinas	Electric	2003	27,717	3
North Carolina	Duke Energy Progress	Electric	2016	23,860	1
Oklahoma	Oklahoma Gas and Electric	Electric	2002	6,509	3
Oklahoma	Oklahoma, Public Service Co. of	Electric	2013	4,430	2
Oregon	Bonneville Power Administration	Electric	1998	6,597	3
Oregon	PacifiCorp	Electric	2011	21,091	1
Oregon	Portland General Electric	Electric	2013	6,800	1
Pennsylvania	Duquesne Light Co.	Electric	1993	2,685	5
Pennsylvania	PPL Electric Utilities	Electric	1999	6,502	3
Pennsylvania	UGI Utilities, Inc. - Electric Division	Electric	1969	147	7
Pennsylvania	West Penn Power	Electric	1994	2,205	3
Rhode Island	Narragansett Electric Company	Electric	2016	2,385	1
South Carolina	South Carolina Gas & Electric Co.	Electric	2004	7,388	2
South Dakota	Black Hills Power	Electric	2012	981	1
South Dakota	Black Hills Service Co.	Electric	2012	55	1
South Dakota	Black Hills Utility Holdings, Inc.	Electric	2012	147	1
Texas	El Paso Electric	Electric	2002	541	3
Vermont	Green Mountain Power Co.	Electric	2010	1,200	2
Virginia	Dominion Virginia Power	Electric	2005	25,345	2
Washington, DC	Potomac Electric Power Co.	Electric	2008	2,405	2
Wisconsin	Alliant Energy - WI Power & Light	Electric	2006	4,100	2
Wisconsin	Wisconsin Public Service Corp.	Electric	2008	2,842	1

**DEPRECIATION STUDIES PERFORMED
BY GANNETT FLEMING**

State	Client	Type of Utility	Year of Initial Study	Orig. Cost Recent Study (mil \$)	Studies by GF
Wyoming	Cheyenne Light Fuel Power Co.	Electric	2012	424	1
Alaska	Kuparuk Transportation Co.	Pipeline	2006	136	1
Alaska	TransAlaska Pipeline System	Pipeline	2005	10,801	2
California	San Pablo Bay Pipeline Co., LLC	Pipeline	2008	204	1
Minnesota	Enbridge Pipelines - Lakehead	Pipeline	1998	1,908	3
Florida	CSXT	Railroad	1999	29,622	4
Florida	RailAmerica	Railroad	2010	909	1
Missouri	Kansas City Southern	Railroad	2002	2,098	1
Nebraska	Union Pacific System	Railroad	1983	50,380	3
Texas	Burlington Northern Santa Fe Corp.	Railroad	1984	43,477	11
Virginia	Norfolk Southern Corp.	Railroad	1987	30,797	10
Washington, DC	Amtrak	Railroad	1998	12,105	2
Alaska	Anchorage Water and Wastewater Utility	Water	1985	539	2
Arkansas	United Water Arkansas	Water	2011	51	1
Delaware	Artesian Water Co.	Water	2007	307	1
Florida	Orlando Utilities Commission	Water	2011	504	1
Indiana	Indiana American Water Co.	Water	1995	816	2
Kentucky	Kentucky American Water Co.	Water	2006	320	2
Missouri	Missouri American Water Co.	Water	2002	1,367	3
New Jersey	Aqua New Jersey	Water	2011	178	1
New York	SUEZ Water New York	Water	2014	408	1
North Carolina	Aqua North Carolina	Water	2009	134	1
Ohio	Aqua Ohio, Inc.	Water	2008	182	2
Ohio	Ohio American Water Co.	Water	2011	159	1
Pennsylvania	Aqua Pennsylvania, Inc.	Water	1976	2,384	15
Pennsylvania	City of Bethlehem – Bureau of Water	Water	1996	175	8
Pennsylvania	City of DuBois – Bureau of Water	Water	2012	20	2
Pennsylvania	Hanover Municipal Waterworks	Water	2008	31	2
Pennsylvania	Lancaster, City of - Bureau of Water	Water	1998	58	4
Pennsylvania	Pennsylvania American Water Co.	Water	1988	3,353	10
Pennsylvania	United Water Pennsylvania	Water	2009	193	1
Pennsylvania	York Water Co.	Water	1985	249	10
Tennessee	Tennessee American Water Co.	Water	2007	196	1
Texas	Aqua Texas, Inc.	Water	2010	209	1
Virginia	Aqua Virginia, Inc.	Water	2008	11	2
Virginia	Virginia American Water Co.	Water	2003	176	2
West Virginia	West Virginia American Water Company	Water	2014	664	1
Alaska	Anchorage Water and Wastewater Utility	Wastewater	1985	417	2
Indiana	Indiana American Water Co.	Wastewater	2005	1	1
New Jersey	Aqua New Jersey	Wastewater	2011	10	1
North Carolina	Aqua North Carolina	Wastewater	2009	36	1
Pennsylvania	Lancaster, City of - Bureau of Water	Wastewater	2011	48	1
Pennsylvania	Pennsylvania American Water Company	Wastewater	2008	250	3
Texas	Aqua Texas	Wastewater	2010	209	1

TECHNICAL SPECIALTIES

- Public Utility Plant Depreciation
- Software Development

PERSONAL INFORMATION

- B.S., Mathematics, Lafayette College
- Certified Depreciation Professional
- Past President and Faculty Member, Society of Depreciation Professionals

EXPERIENCE

Mr. Allis is Vice President of Gannett Fleming Valuation and Rate Consultants, LLC. He is located in the Camp Hill, Pennsylvania, office and joined the firm in October 2006. His responsibilities include overseeing the assembly of the basic data required for depreciation studies, conducting statistical analyses of service life and net salvage data, calculating annual and accrued depreciation, and preparing reports and expert testimony setting forth and defending the results of the studies. Mr. Allis is also responsible for Gannett Fleming's proprietary depreciation software, training of depreciation staff, and the development of solutions for technical issues related to depreciation. Several representative assignments include:

- **Fitchburg Gas and Electric Light Company:** The 2019 depreciation study for this electric and gas utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation. Mr. Allis submitted testimony for the Company's rate case.
- **Florida Power & Light Company:** The 2016 depreciation study for this electric utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation. Mr. Allis submitted direct and rebuttal testimony as well as oral testimony in public hearings for the Company's 2016 rate case. Additional services have included annual updates and analyses of the Company's depreciation rates and reserve position.
- **Pacific Gas & Electric Company:** The 2014 and 2017 depreciation studies for this gas and electric utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation. Mr. Allis has submitted testimony in the Company's general rate case and gas transmission and storage case before the California Public Utilities Commission and in electric transmission rate cases before the Federal Energy Regulatory Commission.
- **Narragansett Electric Company:** The 2017 depreciation study for this electric and gas utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation. Mr. Allis submitted testimony for the Company's 2018 rate case.

- **Eversource Energy – Yankee Gas Company:** The 2017 depreciation study for this gas utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation. Mr. Allis submitted testimony for the Company's 2018 rate case.
- **Eversource Energy – Connecticut Light and Power:** The 2016 depreciation study for this electric utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation. Mr. Allis submitted testimony for the Company's 2017 rate case.
- **Nevada Power Company:** The 2017 depreciation study for this electric utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation. Additional services included expert testimony for the Company's 2017 general rate case.
- **Sierra Pacific Power Company:** The 2016 depreciation study for this electric utility included the development of service life and net salvage estimates, field inspections, the calculation of annual and accrued depreciation, and a detailed analysis of the Company's theoretical reserve. Direct and rebuttal testimony were submitted, as well as oral testimony in public hearings.
- **Potomac Electric Power Company:** The depreciation studies for this electric utility included the development of service life and net salvage estimates, and the calculation of annual and accrued depreciation. Mr. Allis submitted testimony for the Company's 2013, 2016 and 2017 rate cases in the District of Columbia.
- **Consolidated Edison Company of New York:** The depreciation studies for this electric and gas utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation. Mr. Allis submitted testimony in the Company's 2016 and 2019 rate cases. Additional services have included the 2013 and 2016 depreciation studies for the electric and gas divisions of the Company's affiliate, Orange and Rockland Utilities.

Mr. Allis is a past president of the Society of Depreciation Professionals. He has contributed to publications by the American Gas Association and Edison Electric Institute, including "Introduction and Depreciation for Public Utilities and Other Industries" and "Depreciation in an IFRS Environment." His technical education has included the completion of the "Depreciation Basics," "Life and Net Salvage Analysis" and "Preparing and Defending a Depreciation Study" courses offered by the Society of Depreciation Professionals. He also serves as an instructor for the Society of Depreciation Professionals' "Introduction to Depreciation," "Depreciation and Ratemaking," "Life and Net Salvage Analysis," "Analyzing the Life of Real-World Property" and "Analyzing Net Salvage in the Real World" courses.

TECHNICAL SPECIALTIES

- Public Utility Plant Depreciation
- Public Utility Plant Original Cost

PERSONAL INFORMATION

- M.B.A., York College of Pennsylvania, 1997
- B.S., Industrial Management and Mathematics, Carnegie-Mellon University, 1986
- Certified Depreciation Professional
- Member, Society of Depreciation Professionals – President, 2012
- Member, American Gas Association Industry Accounting Committee

EXPERIENCE

Mr. Spanos is President of Gannett Fleming Valuation and Rate Consultants, LLC. He is located in the Camp Hill, Pennsylvania, office and joined the firm in 1986. He oversees the assembly of basic data required for depreciation studies, conducts statistical analyses of accounting data, estimates service life and net salvage, and calculates annual and accrued depreciation. He performs field inspections for purposes of estimating service lives and verifying property records for original cost and depreciation studies. He also has supervised the updating of continuing property records. Mr. Spanos supports the depreciation studies with expert testimony and continually presents key depreciation issues at industry conferences. Several representative assignments include:

- **Duke Energy Corporation:** The studies have included the development of annual depreciation rates for electric plant in service for Duke Energy Carolinas, Duke Energy Progress, and Duke Energy Indiana, as well as annual depreciation rates for electric, gas and common plant in service for Duke Energy Ohio and Duke Energy Kentucky. The studies included field inspections of electric and gas facilities, a comprehensive review of the historical data, statistical analyses to determine the service life and net salvage estimates and the development of annual and accrued depreciation using several alternative bases and procedures. Written and oral testimony was prepared for the proceedings.
- **PacifiCorp/MidAmerican Energy Company:** The studies included the development of annual depreciation rates for electric and gas plant in service within multiple jurisdictions. The studies included life analyses using actuarial methods as well as semi-actuarial analyses. The net salvage component of depreciation included interim and terminal percentages for all generation facilities. In addition to statistical analyses, field inspections were conducted along with extensive discussions with operational personnel to gain a general understanding of the functionality of all asset classes. The studies included presentations to all jurisdictional parties.

- **NiSource**

Columbia Gas of Pennsylvania

Columbia Gas of Virginia

Columbia Gas of Kentucky

Columbia Gas of Massachusetts

Columbia Gas of Maryland

Northern Indiana Public Service Company: Each study was conducted with specific jurisdictional requirements which affect the annual depreciation accrual rates. Each study includes the estimation of service lives, the utilization of the life span technique and net salvage analyses. The depreciation rates were calculated using various depreciation methods and procedures to meet state regulatory policy. Field inspections were conducted and for electric facilities, terminal net salvage values established.

- **Eversource Energy:** The studies have included the development of annual depreciation rates for electric plant in service for NSTAR Electric Company, Western Massachusetts Electric Company(WMECO) and Public Service Company of New Hampshire, as well as annual depreciation rates for gas plant in service for NSTAR Gas. The NSTAR Electric and WMECO assignments included the merger of the two entities into one common study. The elements of each depreciation study included a field inspection of representative facilities, data assembly and life analysis for generation, storage, transmission and distribution accounts, discussions with management regarding outlook, the estimation of service life and net salvage and the calculation by plant account of annual depreciation rates.
- **Dominion Energy:** The studies have included the development of annual depreciation rates for electric plant in service for Virginia Electric and Power Company; gas plant in service for Dominion Energy West Virginia and Dominion East Ohio, as well as annual depreciation rates for electric, gas and common plant in service for Dominion Energy South Carolina, Inc. The studies included field inspections of electric and gas facilities, a comprehensive review of the historical data, statistical analyses to determine the service life and net salvage estimates and the development of annual and accrued depreciation using several methods and procedures. The studies included the recovery of renewables and conversion to new technology for major asset classes.
- **American Waterworks:** For Pennsylvania American Water Company, several studies have been performed for the Company and include the estimation of service lives, unitization of acquired treatment plant facilities and the determination of original costs for acquired water and wastewater systems. The service life studies included data assembly of numerous predecessor water and wastewater systems, statistical analyses of service life and calculation of annual depreciation accrual rates for a rate filing with the state utility commission. The unitization of treatment plant facilities included a field inspection of each acquired plant and identification of property on a retirement unit basis for establishing property records. The determination of the original cost of assets to be acquired from small water systems within Pennsylvania included field reviews of the water and wastewater systems, verification of plant accounting records, Handy-Whitman indexing of property costs and establishment of original cost less depreciation. The rate proceeding included multiple test years for a total of 8 water and

wastewater operating systems. Additional depreciation assignments have been conducted recently for New Jersey, Virginia, Illinois, Iowa, Indiana, Missouri, Kentucky, West Virginia, Tennessee and Maryland.

- **Aqua America:** Each study was conducted to meet the state jurisdictional requirements which affect the annual depreciation accrual rates for water and wastewater companies. Assignments include Pennsylvania, New Jersey, Ohio, North Carolina, Virginia, Texas and Illinois. Each study includes the estimation of service lives and net salvage analyses. The depreciation rates were calculated using various depreciation methods and procedures to meet state regulatory policy. Field inspections were conducted and for some water and wastewater facilities life span dates were established.

Mr. Spanos' technical education has included formal instructional programs offered by Depreciation Programs, Inc. Courses successfully completed include "Techniques of Life Analysis," "Techniques of Salvage and Depreciation Analysis," "Forecasting Life and Salvage," "Modeling and Life Analysis Using Simulation," and "Managing a Depreciation Study." He also completed the week-long course "Introduction to Public Utility Accounting" conducted by the American Gas Association.

TECHNICAL SPECIALTIES

- Public Utility Plant Depreciation

PERSONAL INFORMATION

- B.S., Accounting, Cabrini College, 2012
- M.S., Financial Services, Saint Joseph's University, 2016

EXPERIENCE

Mr. Friel is an Analyst for Gannett Fleming Valuation and Rate Consultants, LLC. He is located in the Camp Hill, Pennsylvania, office and joined the firm in 2017. He is responsible for assembling the data required for depreciation studies, conducting statistical analyses of service life and net salvage data, calculating annual and accrued depreciation, and assisting in testimony and report preparation setting forth the results of the studies.

Several representative assignments include:

- **Fitchburg Gas and Electric Light Company:** The 2019 depreciation study for this electric and gas utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation.
- **Public Service Company of New Hampshire:** The 2018 depreciation study for this electric utility included the development of service life estimates and net salvage percentages, field inspections and the calculation of annual and accrued depreciation.
- **Avista Corporation:** A depreciation study was conducted which resulted in recommended annual depreciation accrual rates for electric, gas and common plant accounts. Tasks included the conversion of property records, statistical analysis of service life and net salvage, field inspections, reconciliation of data to company ledgers and the calculation of annual accrued depreciation.
- **Narragansett Electric Company:** The 2016 depreciation study for this electric and gas utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation.
- **New Jersey American Water:** A depreciation study was conducted in 2016, which resulted in recommended annual depreciation accrual rates by account for water and wastewater property. Tasks included the conversion of property records, statistical analysis of service life, reconciliation of data to company ledgers, and preparation of depreciation results for filing with the State of New Jersey Board of Public Utilities.
- **Consolidated Edison Company of New York:** The depreciation studies for this electric and gas utility included the development of service life and net salvage estimates, field inspections and the calculation of annual and accrued depreciation.

Additional services include the 2016 depreciation studies for the electric and gas divisions of the Company's affiliate, Orange and Rockland Utilities.

- **Pacific Gas & Electric Company:** The 2017 depreciation study for this gas and electric utility included the development of service life and net salvage estimates and the calculation of annual and accrued depreciation. Mr. Friel supported the submittal of testimony in the Company's general rate case and gas transmission and storage case before the California Public Utilities Commission and in the Company's electric transmission rate cases before the Federal Energy Regulatory Commission.
- **Aqua Illinois, Inc.:** A depreciation study was conducted, which resulted in recommended annual depreciation accrual rates by water and wastewater plant account. Tasks included the conversion of property records, statistical analysis of service life, reconciliation of data to company ledgers, and preparation of depreciation results for filing with the Illinois Commerce Commission.
- **Suez Water New Jersey:** The depreciation studies for this water utility included the development of service life and net salvage estimates, and the calculation of annual and accrued depreciation for both water and wastewater plant assets. Mr. Friel assisted with submitting testimony to the State of New Jersey Board of Public Utilities.

Mr. Friel's technical education has included formal instructional programs offered by the Society of Depreciation Professionals. Courses successfully completed include "Depreciation Fundamentals", "Analyzing the Life of Real-World Property" and "Analyzing Net Salvage in the Real World". Mr. Friel has also completed the weeklong course "Introduction to Public Utility Accounting" conducted by the Edison Electric Institute and American Gas Association.

DEPRECIATION STUDIES OF ELECTRIC AND GAS PLANT

EVERSOURCE ENERGY

Connecticut Light and Power

NSTAR Electric

NSTAR Gas

Public Service Company of New Hampshire

Western Massachusetts Electric Company

Yankee Gas Company

Berlin, Connecticut

Eversource Energy is New England's largest energy delivery company, with more than 3.6 million electric and natural gas customers in Connecticut, Massachusetts and New Hampshire. The assignments for Eversource have been to prepare depreciation studies of the electric and gas plant for the Company's utility subsidiaries. The studies have been submitted to the respective state utility commissions as appropriate.

The first study conducted by Gannett Fleming for Eversource was Connecticut Light and Power's 2013 Depreciation Study. Subsequent to the initial assignment, Gannett Fleming has performed depreciation studies for NSTAR Electric, NSTAR Gas, Western Massachusetts Electric Company, Yankee Gas Company, Aquarion Water Company and Public Service Company of New Hampshire. The survivor curve and net salvage estimates for each study were based on judgment which incorporated statistical analyses of historical data, consideration of the condition and use of the property based on field inspections, plans of management, and a general knowledge of electric and gas property life and net salvage characteristics. The annual depreciation accrual rates for each assignment were based on the straight line average service life procedure using the remaining life basis. Prior to the merger that formed Eversource, Gannett Fleming also conducted depreciation studies for NSTAR Gas and NSTAR Electric.

For each study filed with their respective state utility commissions, including the New Hampshire Public Utilities Commission, Gannett Fleming provided testimony defending the depreciation studies in rate cases related to issues including mass property service lives, mass property life analysis, the recovery of net salvage, net salvage estimates and the theoretical reserve.

DEPRECIATION STUDY OF ELECTRIC PLANT AND DEPRECIATION CONSULTING SERVICES

Florida Power & Light Company

Juno Beach, Florida

Florida Power & Light Company (FPL), part of NextEra Energy, Inc., is an electric utility headquartered in Juno Beach, Florida. FPL provides electric service to more than 4.8 million customers in Florida. The assignments for FPL have been to prepare depreciation studies of the electric plant of the company for book and ratemaking purposes and to provide annual depreciation consulting services. The 2009, 2016 and 2021 depreciation studies were submitted to the Florida Public Service Commission.

The survivor curve and net salvage estimates were based on judgment which incorporated statistical analyses of historical data, consideration of the condition and use of the property based on field inspections, plans of management, and a general knowledge of electric property life and net salvage characteristics. Net salvage associated with interim retirements for production plant accounts also was estimated. The annual depreciation accrual rates were based on the straight line average service life procedure using the remaining life basis.

The initial depreciation study for FPL was submitted as part of the Company's 2009 rate case. Gannett Fleming provided written and oral testimony defending the depreciation study related to issues included production plant life spans, mass property service lives, mass property life analysis, and the theoretical reserve. Gannett Fleming's subsequent studies have been included in the Company's 2016 and 2021 rate cases. Gannett Fleming also provided written and oral testimony defending the depreciation studies in these cases.

Subsequent to the 2009 rate case, Gannett Fleming has also provided annual depreciation consulting services for Florida Power & Light related to depreciation rates and theoretical reserves.

DEPRECIATION STUDIES OF ELECTRIC AND GAS PLANT

Pacific Gas and Electric Company
San Francisco, California

The assignments for Pacific Gas and Electric were to prepare depreciation studies of the electric and gas plant of the company for book and ratemaking purposes. The studies have been submitted to the California Public Utilities Commission and the Federal Energy Regulatory Commission.

The survivor curve and net salvage estimates were based on judgment which incorporated statistical analyses of historical data, consideration of the condition and use of the property based on field inspections, plans of management, and a general knowledge of electric property life and net salvage characteristics. Net salvage associated with interim retirements for production plant accounts also was estimated. Service life estimates have been based on the Simulated Plant Record (SPR) methodology, as well as actuarial analysis based on statistical aging. The annual depreciation accrual rates were based on the straight line average service life procedure using the remaining life basis.

Gannett Fleming has provided written and oral testimony defending the depreciation studies submitted to the California Public Utility Commission related to issues including mass property service lives and net salvage. The depreciation studies for electric transmission plant have also been filed with the Federal Energy Regulatory Commission, and Gannett Fleming provided written and oral testimony in these proceedings.

LIST OF REFERENCES
DEPRECIATION STUDIES

Eversource Energy 107 Seldon Street Berlin, CT 06037 [REDACTED]
Florida Power & Light Company 700 Universe Blvd Juno Beach, FL 33408 [REDACTED]
Pacific Gas and Electric Company PO Box 770000 San Francisco, CA 94177 [REDACTED]

ESTIMATES OF COST – PROJECT PRICE SHEETS

REDACTED

Northern Utilities, Inc.
New Hampshire Division
d\b\ a Unitil
Request for Proposal

Area 1: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization
Attachment 1

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	██████		
Research	██████		
Analyses or Studies	██████		
Other Direct Costs	██████		
Total Not To Exceed (through filing)		██████	
Respond to Discovery	<p>*These services will be conducted on a time-and-materials basis and are excluded from the cost proposal.</p>		
Assist in the Interrogation of Testimony			
Prepare Rebuttal Testimony			
Attend Hearings			
Respond to In-Hearing Record Requests			
Assist in Drafting of Legal Brief			
Other Direct Costs			
Total Cost Estimates (post-filing) *		\$	
Grand Total (*Excludes Post-Filing Support)			██████

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.

REDACTED

Northern Utilities, Inc.
New Hampshire Division
d\b\ a Unitil
Request for Proposal

Area 4: Depreciation Study
Attachment 4

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾



PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	██████		
Research	██████		
Analyses or Studies	██████		
Other Direct Costs	██████		
Total Not To Exceed (through filing)		██████	
Respond to Discovery	*These services will be conducted on a time-and-materials basis and are excluded from the cost proposal.		
Assist in the Interrogation of Testimony			
Prepare Rebuttal Testimony			
Attend Hearings			
Respond to In-Hearing Record Requests			
Assist in Drafting of Legal Brief			
Other Direct Costs			
Total Cost Estimates (post-filing) *		\$	
Grand Total (*Excludes Post-Filing Support)			██████

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.

REDACTED

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

2021 BILLING RATES

<u>Personnel</u>	<u>Hourly Rate</u>
SUPERVISORY STAFF	
John J. Spanos, President	
Harold Walker, III, Manager, Financial Studies	
Ned W. Allis, Vice President	
John F. Wiedmayer, Jr., Project Manager, Depreciation	
Constance E. Heppenstall, Senior Project Manager, Rate Studies	
STAFF	
Analysts	
Associate Analysts	
Assistant Analysts III	
Assistant Analysts II	
Assistant Analysts I	
Senior Technicians	
Support Staff	

Northern Utilities, Inc.
Rate Case Consulting Services Agreement

THIS AGREEMENT for the provision of Consulting Services (“Agreement” or “Consulting Services Agreement”), made and entered into on May 11, 2021, by and between Northern Utilities, Inc. (“Northern” or “the Company”), a New Hampshire public utility corporation with its principal place of business at 6 Liberty Lane West, Hampton, NH 03842 and **Gannett Fleming Valuation and Rate Consultants, LLC** (“Consultant”), having its principal place of business at 207 Senate Avenue, Camp Hill, PA 17011-2316.

1. **Services and Deliverables**

Consultant will provide the following services to the Company and furnish the following deliverables (the “Services”): **Depreciation Study**, as described in Unitil’s Rate Case Studies RFP No. USC-42021, and any attachments thereto, as may be modified from time to time by mutual consent, evidenced in writing and signed by both parties.

2. **Do Not Exceed Costs**

As provided in the Consultant’s Response to the RFP dated May 3, 2021, for the **Depreciation Study**, the cost through the Company’s filing of its rate case shall not exceed

3. **Independent Contractor**

Consultant is an independent contractor and not an employee or agent of Northern, Unitil Corporation or any subsidiary thereof. Consultant assumes full and sole responsibility for the payment of all compensation and expenses of its employees and for all of their state and federal income tax, unemployment insurance, Social Security, payroll and other applicable employee withholdings.

4. **Subcontractors**

The Company reserves the right to refuse to permit any person or organization (subcontractor) to participate in the work covered by this Contract, such refusal shall not be unreasonably imposed. No subcontract, if approved by the Company, shall relieve the Consultant of any

liabilities or obligations under the Agreement, and the Consultant agrees that Consultant is fully responsible to the Company for the acts and omissions of Consultant's subcontractors and of persons employed by them. Consultant shall require every subcontractor to comply with the provisions of the Agreement, including the Mutual Confidential Non-Disclosure Agreement.

5. Supervision

Consultant shall perform the Services with reasonable care in a diligent and competent manner. Consultant shall maintain control over its employees and all of its subcontractors.

6. Liability and Indemnification

The Consultant agrees to indemnify, hold harmless and defend the Company, its parent, subsidiaries and affiliates and their respective employees, agents, officers, and directors, from and against any and all liability for loss, damages, fines, penalties, claims, actions, proceedings, expense, or cost, including but not limited to attorney's fees and litigation expenses which may be asserted against the Company or which the Company may incur or be held liable by reason of:

- bodily injury, including death, sustained by or alleged to have been sustained by any person or persons, including but not limited to employees of the Company, employees of the Consultant, employees of any subcontractor or any other third parties, and without regard to whether the person or persons are working within the scope of their employment;
- damage to property;
- personal injury, including but not limited to, false arrest, false imprisonment, or violation of privacy rights;
- any unlawful employment practice of the Consultant or any subcontractor, including without limitation, employment discrimination, wrongful discharge, termination of employment or violation of state or federal statutes or regulations relating to employment practices; or

- resulting from the acts and/or omissions of Consultant or subcontractor, its employees, agents, subcontractors or those under its or their control, and/or arising out of or in any manner connected with the performance of this Agreement or the operations to be performed under this Agreement to the extent such injury or damage is caused by or is attributable in whole or in part to any act or omission of the Consultant, its affiliates or its or their employees or agents or those under its or their control; provided, however, that the Consultant shall not be held responsible for damage to private property when such damage results from the Consultant's having carried out in a proper workmanlike manner instructions received from a duly authorized representative of the Company as to the use to be made of, or act to be performed on, such private property.

7. Payment

Payment for services rendered shall be at the billing rate or rates as set forth at Page 56 of the Consultant's Response to the RFP dated May 3, 2021. Consistent with the requirements of the New Hampshire Public Utilities Commission, the Company requires detailed hourly billing that will withstand the scrutiny of the Commission for rate case cost recovery. This means that bills should be detailed enough to justify cost recovery to the Commission while not divulging litigation work product, and shall at a minimum include the number of hours worked, the billing rate, and the specific nature of services performed. All other out-of-pocket expenses, including cost of travel or travel-related expenses, telephone, duplication, and delivery costs ("Other Direct Costs") should be tracked and identified separately on bills. The Company will remit payment on all appropriate invoices within thirty (30) days of receipt.

8. Confidentiality

Consultant acknowledges and agrees that due to the unique nature of this Agreement, Consultant shall be required to enter into a separate Mutual Confidential Non-Disclosure Agreement with Company in the form attached hereto as Attachment 1.

9. Non-Solicitation

During the term of this engagement, and for a period of one year following its expiration or termination, Consultant will not directly or indirectly solicit, employ or otherwise engage any Company employees (including former employees) or contractors who were involved in the engagement.

10. Complete Agreement

This Agreement constitutes the complete agreement between the Parties on the subject matter identified herein, and supersedes all prior oral and written communications between the Parties, and may be amended, modified or changed only in writing when signed by both parties. No term of this Agreement will be deemed waived, and no breach of this agreement excused, unless the waiver or consent is in writing signed by the party granting such waiver or consent.

11. Compliance with Laws

Consultant warrants that in performing work under this order Consultant will comply with all applicable laws, rules and regulations of governmental authorities and agrees to indemnify and save the Company harmless from and against any and all liabilities, claims, costs, losses, expenses, and judgments arising from or based on any actual or asserted violation by the Consultant of any such applicable laws, rules and regulations.

12. Assignment

Consultant agrees that neither this Agreement nor any interest herein shall be assigned or transferred by Consultant except with the prior written approval of the Company.

13. Governing Law

The rights of the parties hereto and the construction and effect of this contract shall be subject to and determined in accordance with the laws of the State of New Hampshire.

14. Severability

If any particular provision of this Contract be rendered or declared invalid by a court of competent jurisdiction of the State of New Hampshire, such invalidation of such part or portion of this Contract should not invalidate the remaining portions thereof, and they shall remain in full force and effect.

NORTHERN UTILITIES, INC.

By: Robert B. Hevert

Robert B. Hevert

NAME (PRINT OR TYPE)

TITLE: Sr. Vice President

Date: May 11, 2021

**GANNETT FLEMING VALUATION AND
RATE CONSULTANTS, LLC**

By: Ned W. Allis
DocuSigned by:
B1B7ADF0E1B342F...

Ned W. Allis

NAME (PRINT OR TYPE)

TITLE: Vice President

Date: May 11, 2021

ATTACHMENT 1:
MUTUAL CONFIDENTIAL NON-DISCLOSURE AGREEMENT

This MUTUAL CONFIDENTIAL NON-DISCLOSURE AGREEMENT is made as of May 11, 2021 between **Gannett Fleming Valuation and Rate Consultants, LLC** ("Consultant"), having its principal place of business at 207 Senate Avenue, Camp Hill, PA 17011-2316, and **Northern Utilities, Inc.** ("the Company") having a principal place of business at 6 Liberty Lane West, Hampton, NH 03842, (together "the Parties," individually "a Party"). The Parties hereby agree that disclosures of confidential information shall be governed by the following terms and conditions. A Party receiving information under this Agreement is referred to as "Recipient," and a Party disclosing information is referred to as "Discloser."

1. Definition of Confidential Information "Confidential Information" means any oral, written, graphic or machine-readable information including, but not limited to, any and all confidential and proprietary information, including all information or material that has or could have commercial value or other utility in the business or the prospective business of the Discloser, disclosed by the Discloser to the Recipient in connection with this Agreement, whether committed to memory or embodied in writing or other tangible form. Confidential Information includes, without limitation, contracts, fees, accounts, records, customer and client information, agreements and any other incident of the Discloser's business disclosed to the Recipient, which Confidential Information is clearly marked or identified as being "confidential" or "proprietary" (or a similar restrictive legend). Confidential Information does not include any information which Recipient can document: (a) is known to Recipient at the time of disclosure; (b) is independently developed by Recipient without use of the Confidential Information; (c) becomes known to Recipient from another source without confidentiality restriction on subsequent disclosure or use; (d) is or becomes part of the public domain through no wrongful act of Recipient; or (e) is information approved for disclosure or release by the Recipient by written authorization from the Discloser. Confidential Information does not include any source code or technical information subject to a license that meets the requirements of the Open source Definition. The Open Source Definition is found at <http://www.opensource.org/osd.html>.

2. Purpose for Disclosure The Parties may only use Confidential Information for the following purpose (the “Purpose”): Providing services as described in the Consulting Services Agreement between the Parties.

3. Non-Disclosure of Confidential Information Recipient agrees: (i) to use the same degree of care, but no less than a reasonable degree of care, to protect against the unauthorized disclosure of Discloser’s Confidential Information as it uses to protect its own Confidential Information; (ii) not to divulge any such Confidential Information or any information derived therefrom to any third person; (iii) not to make any use whatsoever at any time of such Confidential Information except as necessary in accordance with the Purpose; (iv) not to copy or reverse engineer any such Confidential Information; and (v) not to export or re-export (within the meaning of U.S. or other export control laws or regulations) any such Confidential Information or product thereof. Recipient agrees to disclose Confidential Information only to its directors, officers, employees, consultants, agents or independent contractors (its “Representatives”) with a direct need to know to effect the Purpose, and who are bound by legally enforceable obligations of confidentiality no less restrictive than the terms of this Agreement. Recipient shall not remove the proprietary notices from Confidential Information. Each Party agrees to promptly notify the other Party in writing of any misuse or misappropriation of Confidential Information of the other Party of which it becomes aware.

4. Mandatory Disclosure In the event that Recipient or its Representatives is requested or required by legal process or applicable regulations or laws to disclose any of the Confidential Information of Discloser, Recipient shall give prompt notice so that Discloser may seek a protective order or other appropriate relief. If such protective order is not obtained, Recipient shall disclose only that portion of the Confidential Information that its counsel advises that it is legally required to disclose.

5. Remedies Recipient acknowledges and agrees that due to the unique nature of Discloser’s Confidential Information, there may be no adequate remedy at law for any breach of Recipient’s obligations hereunder, which breach may result in irreparable harm to the Discloser and therefore, that upon any such breach of any threat thereof, the Discloser shall be entitled to seek appropriate equitable relief in addition to whatever remedies it might have at law.

6. Term The foregoing commitments of each Party shall survive any termination of the Purpose, and shall remain in effect with respect to any particular Confidential Information unless and until the Recipient can document that one of the exceptions stated in Section 1 applies, or unless mutually agreed, as evidenced by writing, to a shorter period.

7. No Additional Agreements; No Prohibition on Agreements Nothing herein shall obligate either Party to disclose any Confidential Information or negotiate or enter into any agreement or relationship with the other Party. Nothing herein shall prohibit a Party from entering into any arrangement or agreement with a third party.

8. No Warranty The Parties understand and agree that Confidential Information is provided “as is”; neither Party shall have any responsibility to the other based on any claim that any information furnished hereunder was incorrect, incomplete, or defective in any way. Neither Party makes any warranties, whether express, implied or statutory, regarding the sufficiency of the information disclosed for any purpose, including warranties of merchantability, fitness for a particular purpose, and non-infringement.

9. General (a) Assignment: This Agreement is not assignable or transferable by either Party; any attempted assignment will be void and without effect, unless such assignment is agreed to in writing by both Parties. (b) No Other Rights: No rights, title, license of any kind in any Confidential Information is provided hereunder, either expressly or by implication, estoppel or otherwise. (c) No Agency: This Agreement does not create any agency or partnership relationship. (d) No Waiver: No waiver of any provision of this Agreement, or a breach of this Agreement shall be effective unless it is in writing, signed by the Party waiving the provision or the breach. No waiver of a breach of this Agreement (whether express or implied) shall constitute a waiver of a subsequent breach of this Agreement. (e) Choice of Law: This Agreement will be governed by and interpreted in accordance with the laws of the State of New Hampshire, excluding its choice of laws rules. (f) Complete Agreement: This Agreement constitutes the complete agreement between the Parties on the subject matter identified herein.

Any modifications to this Agreement must be made in writing and signed by both Parties.

NORTHERN UTILITIES, INC.

**GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC**

By: Robert B. Hevert

By: DocuSigned by:
Ned W. Allis
B1B7ADF0E1B342F...

Robert B. Hevert
NAME (PRINT OR TYPE)

Ned W. Allis
NAME (PRINT OR TYPE)

TITLE: Sr. Vice President

TITLE: Vice President

Date: May 11, 2021

Date: May 11, 2021



Northern Utilities, Inc. – New Hampshire Division
Request for Proposal No. USC-42021,
Rate Case Studies

May 3, 2021





ATRIUM ECONOMICS
CENTERED ON ENERGY

Atrium Economics
10 Hospital Center Commons, Suite 400
Hilton Head Island, SC 29926
+1 425-765-9385 | RAmen@atriumecon.com

May 3, 2021

Rate Case Studies Proposal Evaluation Committee
Northern Utilities, Inc.
New Hampshire Division
6 Liberty Ln W
Hampton, NH 03842

Reference: Request for Proposal No. USC-42021, Rate Case Studies

Dear Proposal Evaluation Committee:

Atrium Economics, LLC ("Atrium") is pleased to present this proposal to Northern Utilities, Inc. d/b/a Unitil ("Unitil" or "Company") for consulting services in support of Unitil's interest in retaining expert assistance in preparing several studies for a forthcoming natural gas base rate case filing on or before July 30, 2021. We are enthusiastic about having an opportunity to work with Unitil throughout the regulatory review process and believe that we have the expertise to assist the Company in achieving acceptance of its costing and ratemaking proposals by the New Hampshire Public Utilities Commission ("NHPUC" or "Commission").

Our firm's foundational business philosophy is to bring objectivity, centered on expertise and critical thinking, to addressing a client's specific needs. We value our ability to work collaboratively and effectively with our clients, and to establish lasting relationships by maintaining an ongoing interest in the successful implementation of our advice and recommendations. We are passionate about our work in the energy industry, with a deep understanding of the critical issues facing the industry, our clients, and their future.

The members of our consulting team have extensive backgrounds and experience both in management positions inside electric and gas utilities and as advisors to our clients. Our experts have worked in dozens of jurisdictions across North America as consultants and in executive positions with utility companies.

Our consulting team includes recognized experts across a broad range of utility regulatory policies, costing and ratemaking practices, and also energy industry trends, including the interplay between integrated resource planning and the corresponding implications for prudent utility resource

decisions, cost recovery and ratemaking. Our level of support has included expert witness testimony before federal, state, municipal and provincial regulatory agencies.

Our proposed project team possesses a depth of experience and breadth of knowledge that enables us to offer you the full range of costing, technical, pricing and financial services required to provide the types of rate case consulting services being requested. Atrium's team members have led successful projects for other utilities similar to that requested by Unitil, as shown in our resumes and project experience. We are committed to providing the qualified staff identified in the Project Team section of our proposal document. We will work closely with Unitil's staff and management team throughout the engagement to promote input by the Company's representatives, and efficient engagement completion.

It is our sincere hope that this proposal conveys Atrium's commitment to assist Unitil in this important regulatory assignment. If you should have any questions concerning our relevant experience and capabilities, or require any further detail concerning how we intend to undertake the expected work effort, please do not hesitate to contact me at 425-765-9385 or Ramen@atriumecon.com.

Very truly yours,



Ronald J. Amen
Managing Partner



Table of Contents

Corporate Capabilities and Experience	4
Project Team	6
References	9
Selected Client Engagement Examples.....	10
Statement of Work	14
Fee Estimate.....	21
Project Timing	22
Potential Conflicts	22
Contracting.....	22
Appendix A –Project Price Sheets.....	23
Appendix B – Fee and Timeline Detail.....	25
Appendix C – Senior Team Member Resumes	27

Attachments

- Attachment 1 – Project Price Sheet: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization
- Attachment 2 – Project Price Sheet: Revenue Decoupling

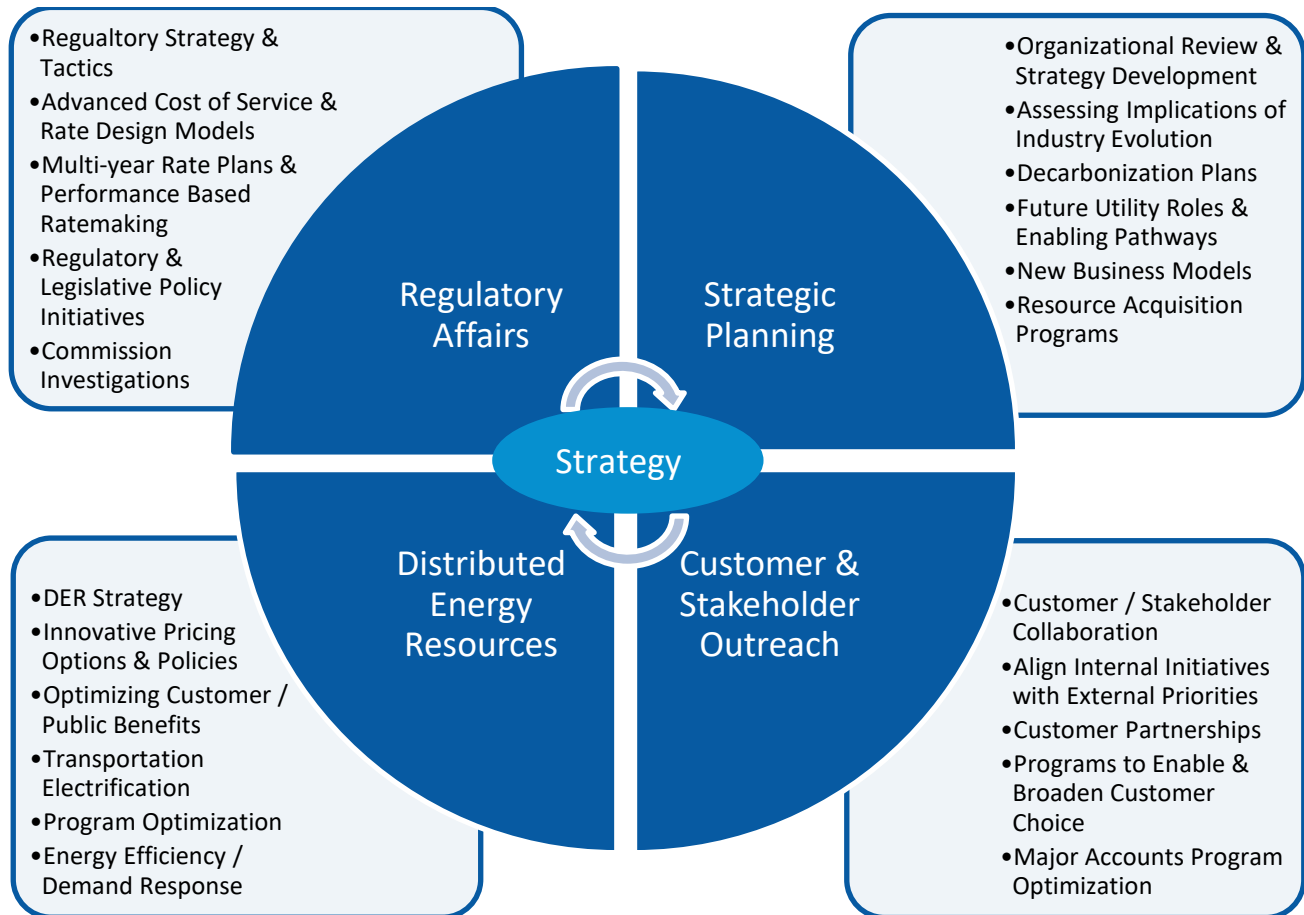


Corporate Capabilities and Experience

Strategy, Policy, Planning & Multi-Discipline Services

Our consulting team brings a comprehensive range of capabilities and experience to assist utilities in developing customer centric solutions.

Providing a unique perspective, our experts are capable of guiding energy utility organizations through the following areas.



Regulatory Affairs

Obtaining a thorough grasp of legislation and regulatory precedents across the utility industry will help in navigating the regulatory landscape, its constraints and opportunities. Regulatory solutions are absolutely critical to support business initiatives, where deep experience matters.

Strategic Planning

In our rapidly transforming industry, utilities must explore a range of new roles and business models. It is critical to examine and select new roles and initiatives whereby the utility can create



and deliver superior value, while the organization develops and maintains a durable advantage over potential competitors.

Customer & Stakeholder Outreach

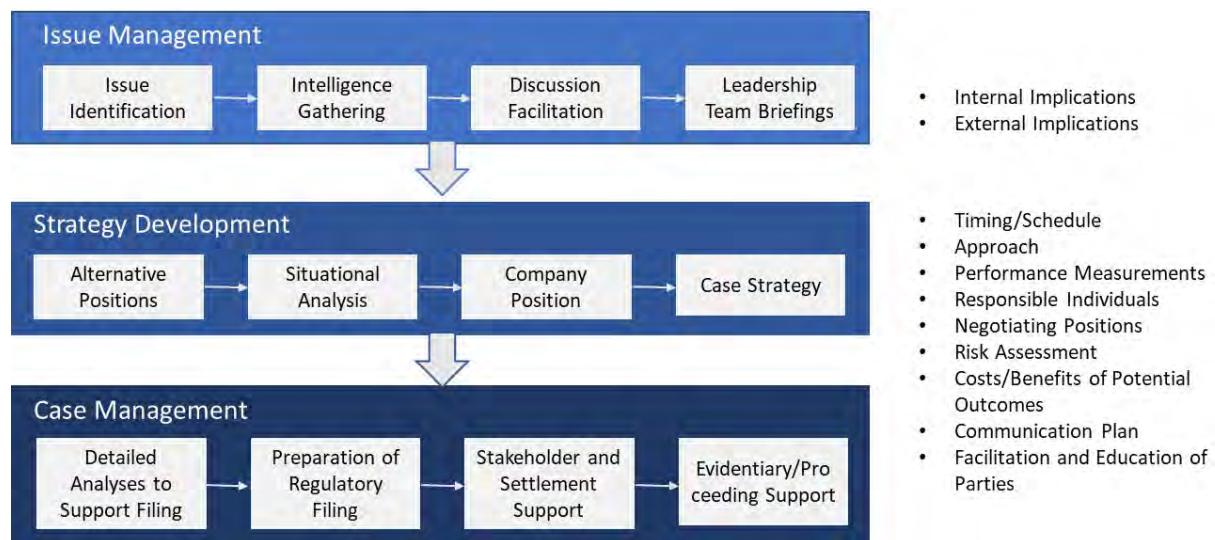
An important component to the success of a stakeholder outreach strategy is an assessment of the internal processes and policies that will interact with or otherwise impact the initiative. Many programs succeed or fail based on the effectiveness of customer outreach and engagement, particularly among target communities, regulators, and customers who would be served by the particular program. Our team has extensive experience managing the stakeholder engagement process for a variety of industry activities. This experience includes: initial stakeholder outreach, identification of key issues across the stakeholder spectrum, public meetings and presentations at key stages during the process and early and targeted problem solving to maximize buy-in from all stakeholders.

Distributed Energy Resources

Innovation and engagement around DER penetration is a critical issue for utilities. The role of distributed generation includes maximizing existing resources, potential additional resources, and integrating assets. Utilities will need to work with both governments and customers to enable a future where they can reliably offer alternative energy solutions and programs that optimize value for customers and utilities.

Regulatory Case and Issue Management Support

The consulting team has extensive experience with developing ratemaking and regulatory policy. The nature of the services provided by our team encompass all areas of rate case planning, strategy development, and execution, whether on a turn-key basis or selective service offerings. We employ a step-wise approach to regulatory issue resolution:



Project Team

It is Atrium's practice to assign a fully experienced team to engagements of this nature where the scope of work involves critical and potentially complex cost analysis and retail rate structures. We believe our consulting staff has the expertise, relevant qualifications and judgment to be fully responsive to Unitil's needs in this work effort.

To ensure the depth of experience expected by Unitil is provided, we have proposed senior members of our team as well as a junior Atrium consultant who will participate in the project to provide analytical and research support to moderate the overall project cost without sacrificing project content. Resumes of the senior members of the project team are presented in **Appendix C**.



Ronald Amen, Managing Partner

Mr. Amen will serve as Atrium's engagement liaison and project manager, responsible for overall project coordination with Unitil's project team. He has over 40 years of combined experience in utility management and consulting with particular expertise in the areas of resource strategy, planning and evaluation; regulatory strategy; cost allocation and pricing; alternative regulatory mechanisms, and expert witness testimony. Mr. Amen has provided natural gas and electric resource planning strategy and analysis, including the evaluation of electric transmission and storage facilities, incremental inter- and intra-state pipeline capacity, underground storage and LNG facilities. He has compiled case studies for energy resource procurement and risk management practices, including identification of best practices across the industry and conducted a review of the natural gas value chain in the U.S. He has filed transportation service tariffs with FERC, supported by cost of service and related testimony; and has performed due diligence related to mergers and acquisitions of U.S. energy utilities.

Mr. Amen has testified as an expert witness before numerous state and provincial regulatory bodies across North America and given presentations to industry groups on regulatory policy issues, resource planning and acquisition, utility costing and ratemaking topics.

Mr. Amen's twenty-three-year consulting career includes *Managing Partner of Atrium Economics, LLC*; *Director – Advisory & Planning, with Black & Veatch Management Consulting, LLC*; *Vice President of Concentric Energy Advisors, Inc.*; and *Director with Navigant Consulting, Inc.* His prior utility management career included leading federal & state regulatory affairs for two gas/electric utilities, representing their interests in proceedings before state utility regulatory agencies and FERC. Mr. Amen's office location is Redmond, WA.





John Taylor, Managing Partner

Mr. Taylor is a utility pricing expert with experience developing cost of service studies for both electric and gas utilities and transmission companies. He has deep experience with developing residential and commercial rates, analyzing midstream transportation and storage capacity resources, and assessing the relationship between price signals and the adoption of distributed generation assets. He has filed testimony as an expert witness on class cost of service studies for both electric and natural gas utilities, return on equity, and on the appropriate use of statistical analysis during audit testing. Mr. Taylor has supported projects involving financial analysis, regulatory support and strategy, market assessment, litigation support, and organizational and operations reviews. He has an expert knowledge of cost allocation principles for utility cost of service studies and for affiliate transaction and service agreements. He has worked as the market monitor for New England ISO's capacity market, supported the negotiation of PPAs, and supported feasibility and prudence studies of generation investments. He has also been involved in the sale of generating assets as sell side advisors, supporting due diligence efforts, financial analyses, and regulatory approval processes.

His consulting career includes *Managing Partner with Atrium Economics, LLC; Principal Consultant – Advisory & Planning with Black & Veatch Management Consulting, LLC; Senior Project Manager & Principal of Concentric Energy Advisors, Inc.; and CEO of Nova Data Testing, Inc.* Mr. Taylor started his career working on Hill for NGOs that were seeking Public – Private Partnerships with the Federal Government, World Bank, and International Monetary Fund to pursue various projects in developing countries. Mr. Taylor's office location is Hilton Head, SC.

Greg Macias, Managing Consultant

Mr. Macias is a utility rate and regulatory expert with experience developing cost of service studies, depreciation studies and regulatory research. He has deep experience with developing residential and commercial rates, conducting depreciable life and accrual rate analysis, and participating in utility regulatory proceedings. Mr. Macias has supported projects involving financial analysis, regulatory support and strategy, utility plant valuation, and organizational and operations reviews. He has an expert knowledge of cost allocation principles for utility cost of service studies and for depreciation expense and accrual rates. Mr. Macias has also been involved in engineering reports supporting municipal bonds issuances and operations reviews of natural gas utilities. Mr. Macias has testified as an expert witness in multiple state jurisdictions on utility rate issues.

Mr. Macias has been providing consulting services to utility clients for fourteen years, including Principal Consultant – Advisory & Planning, with Black & Veatch Management Consulting, LLC. Prior to beginning his consulting career, Mr. Macias spent ten years with the Missouri Public







Service Commission conducting utility plant depreciation studies and performing LDC natural gas safety and compliance inspections. Mr. Macias's office location is Kansas City, MO.

Chris Hutchinson, Consultant

Mr. Hutchinson is an energy industry professional with 10 years of electric utility and consulting experience providing analytical support and research expertise. Chris excels at crafting high impact short- and long-term optimization analyses for budgeting, risk management, and commodity trading resource planning. He is well versed in various time-of-use rate modeling for whole facilities and electric vehicles and has recent experience with gas LDCs tariff provisions including a focus on balancing services. His previous utility work involved power trading, managing meter data systems, load forecasting, producing regulatory filings and compliance reports, and developing annual capital budgets. Other preceding client work focused on supporting utility cost of service studies, revenue requirement analysis, and rate design. Prior to joining Atrium, Chris was employed as a Utility Specialist by the San Francisco Public Utilities Commission and as a Resource Planner for the City of Palo Alto Utilities. Mr. Hutchinson's office location is Minneapolis, MN.



References

Reference	Project	Project Team
Puget Sound Energy 	Cost of Service and Rate Design, Decoupling, Attrition Adjustment, Multi-Year Rate Plan (2001-2020)	John Taylor Ron Amen
Chesapeake Utilities Corporation & Florida Public Utilities 	Cost of Service & Rate Design, Decoupling, Migration of Customers, and Swing Service Review (2016-2021)	Ron Amen John Taylor
Montana-Dakota Utilities Co. & Great Plains Natural Gas 	2020/2021 Gas Rate Cases in Montana and North Dakota	Ron Amen Greg Macias
UGI Utilities, Inc. 	Cost of Service and Electric Rate Case Support (2018, 2021)	John Taylor Greg Macias



Selected Client Engagement Examples

Puget Sound Energy, Bellevue, Washington - Electric & Gas Rate Case Support (2001 - 2002, 2006 - 2007, 2019 - 2020)

Messrs. Amen and Taylor provided electric and gas revenue requirement support, including historical trending and regression analysis to support an attrition adjustment for the recently concluded electric and gas general rate case, including expert witness testimony by Ron Amen and John Taylor. Cost of service, rate design support, and an evaluation and allocation of upstream gas transportation and storage resources, including expert testimony, was also provided in the case.

In two prior Washington general rate proceedings, Ron Amen provided cost of service and rate design support, including expert witness testimony in support of the utility's proposed revenue decoupling mechanism. Research on accelerated cost recovery mechanisms for infrastructure replacement, electric power cost adjustment mechanisms and gas supply pricing options of utilities in North America was also provided.

Other prior engagements led by Mr. Amen include:

- A review of PSE's project management and capital spending authorization processes (CSA). The overall project objectives were to educate project management (PM) staff as to the importance and relevance of regulatory prudence standards, evaluate existing PM processes along with newly introduced corporate CSA processes, and propose PM and corporate process and documentation efficiencies.
- A review of how PSE compares to similarly-situated utilities in the areas of the underlying capitalized costs related to new customer additions and the management policies and practices that influence the new business capital investment. Examined the interrelationships of PSE's management policies and practices in the functional areas related to new business investment and the costs captured by the new business investment process. Benchmarked those costs relative to peers' cost factors and management capital expenditure practices and performed targeted peer group interviews.
- A review of its electric transmission planning and project prioritization process. The emphasis of the review was to determine if the process implemented by PSE could be expected to meet the regulatory standard of prudence, as adopted by the state regulatory commission. Reviewed the prudence standard adopted by the commission in several recent regulatory proceedings, supplemented by our knowledge of the prudence standard adopted at a national level and in other states.

Montana-Dakota Utilities Co. and Great Plains Natural Gas, Bismarck, North Dakota - Gas Rate Case Support (2020-2021)

Messrs. Amen and Macias provided cost of service, class revenue apportionment, rate design, and expert witness support for the gas utilities' general rate cases before the Montana Public Service Commission and North Dakota Public Service Commission. Mr. Amen's testimony included theoretical principals and practical application of cost allocation, and rate design principles or



objectives that have broad acceptance in utility regulatory and policy literature. They supported the Straight Fixed-Variable Rate Design (SFV) in North Dakota with analysis showing that low-income residential customers would experience lower annual bills under the SFV rate design than a volumetric weighted rate design. Mr. Amen provided a presentation at a public input hearing and oral testimony at Commission hearings in both jurisdictions. Pending settlement in North Dakota includes SFV rate design.

UGI Utilities, Denver, Pennsylvania - Electric Rate Case Support (2018, 2020)

Mr. Taylor conducted class allocated cost of service studies for the client's Pennsylvania electric operations. Work included conducting all special studies and supporting analyses that informed the allocated class cost of service study, LED rate design, and the exploration of EV Pilot Programs.

As with prior expert testimony engagements in Pennsylvania Mr. Taylor conducted a fully functionalized class cost of service study with a breakdown of the customer related revenue requirement by direct and allocated costs to demonstrate the reasonableness of increasing the fixed monthly customer charge. As with Mr. Taylor's previous engagements for PPL in Pennsylvania the Final Order issued by the Commission was supportive of the customer charges and analyses within the cost of service study supporting the level of customer charges.

Arkansas Oklahoma Gas Corporation – Cost of Service & Rate Design, Revenue Decoupling, Weather Normalization Adjustment

Mr. Amen provided cost of service and rate design support for several of the company's general rate case filings in its two state jurisdictions and in support of Section 311 transportation filings before the Federal Energy Regulatory Commission. He provided related research, design and expert witness testimony in support of a Revenue Decoupling mechanism in one jurisdiction, an analysis and support for a change in the historical "normal" weather period for purposes of normalized billing determinants, and a Weather Normalization Adjustment mechanism in the other jurisdiction, along with a significant increase in fixed charges and the introduction of demand charges for the company's largest customer classes. Conducted a pre-filing "decoupling" workshop for the utility commission staff.

Fitchburg Gas and Electric Light Company – Cost of Service & Rate Design

Mr. Taylor provided cost of service and rate design support in Fitchburg's recent Massachusetts case filed in 2019. Expert witness testimony was provided in support of the allocated class costs of service study used to allocate Fitchburg's costs associated with operations within Massachusetts jurisdiction to distribution customer rate classes, the class revenue increase apportionment, and rate design proposals.

Colorado Natural Gas, Inc. (Summit Utilities) – Weather Normalization Adjustment

Messrs. Amen and Macias were engaged by Summit Utilities to develop and support with expert testimony an appropriate normal weather period for the client's five Colorado temperature zones, resulting normalized billing determinants and a Weather Normalization Adjustment ("WNA")



proposal in conjunction with the filing of a general rate case for its Colorado Natural Gas, Inc. subsidiary.

Northern Indiana Public Service Company (NiSource) – Cost of Service & Rate Design, Revenue Normalization

Messrs. Amen and Taylor conducted class allocated cost of service studies for the client's natural gas (including two other affiliate gas utilities) and electric operations. Their work included reconfiguring the Company's commercial and industrial customer classes according to size of load and customer-related facilities. They were responsible for developing the client's proforma revenue proof, including normalized and annualized billing determinants. Rate design was modernized to recover a greater portion of fixed costs via fixed monthly customer and demand-based charges, a transition to a "Straight-Fixed Variable" form of rate design. Industry research was provided on alternative rate designs for the electric service, including Time-of-Use rates and Critical Peak Pricing. Served as an expert witness on behalf of the client in four general rate cases before the Indiana Utility Regulatory Commission.

CPS Energy (San Antonio, TX) – Regulatory Roadmap, Costing & Pricing Support

Messrs. Amen and Taylor provided support for the client's Strategic Roadmap to prioritize its multi-year regulatory initiatives. (e.g., changes in product and service offerings, restructuring of current rate classes, introduction of new rate structures, rate levels, and tariff provisions). Current pricing processes and platforms were assessed to identify recommended enhancements to enable the development and implementation of dynamic pricing concepts. Assisted client with preparation of the utility's next rate case (e.g., costing and pricing analyses, load forecasting, internal communications, and stakeholder engagement).

Other aspects of the engagement included a review and recommendations for changes to CPS Energy's electric and gas line extension policies, and strategies for addressing the service and pricing requirements of a number of large customer loads, including Joint Base San Antonio and a new Microsoft data center installation.

NextEra Energy Florida Power & Light / Gulf Power – Rate Amalgamation

Mr. Taylor supported NextEra with the rate amalgamation effort required from merging the tariffs of Florida Power & Light and Gulf Power as well as combining their load research and analyses used for purposes of future rate filings. Further, Mr. Taylor is currently leading the analyses of distribution asset investments through conducting an analysis of the minimum sized equipment necessary to extend service to each of the utilities' rate classes. This project involves working with both Gulf Power and FPL plant asset databases and engineering experts as well as facilitating the methodological approach for conducting load research across both operating utilities.

Montana-Dakota Utilities – Cost of Service & Rate Design, Shared Services

Messrs. Amen and Macias provided cost of service and rate design support, including expert witness testimony, for several of the company's general rate case filings in four of its state jurisdictions: three cases in Oregon and two in Washington (for affiliate Cascade Natural Gas); and



one each in Montana and North Dakota. Long-run Incremental Cost Studies were conducted in the Oregon jurisdiction and embedded class allocated cost of service studies in the Washington, Montana and North Dakota jurisdictions.

A review of and recommendations provided regarding the corporate shared services policy and associated cost allocations. Benchmark analyses were performed to compare the client's administrative and general (A&G) and operations and management (O&M) expenses for each jurisdiction, on a per-customer basis, to various peer groups. Analyses were performed for natural gas utilities and combination utilities with both electric and gas operations. Various iterations of the analyses were prepared to make the peer group of utilities more comparable to the characteristics of the client's utility operations.

Mr. Amen also represented the client's interests (as well as those of neighboring utility clients NW Natural and Puget Sound Energy) in a Washington generic rulemaking proceeding on the subject of electric and gas cost of service methodologies and minimum filing requirements.



Statement of Work

Atrium proposes to support Unitil through eight primary tasks; (1) Situational Assessment and Data Collection, (2) Allocated Cost of Service Study (“ACSS”), (3) Marginal Cost Study (“MCS”), (4) Rate Design, (5) Weather, Sales and Revenue Normalization, (6) Revenue Decoupling, (7) Pre-Filed Direct Testimony, and (8) Post-Filing Support. A description of each of these tasks follows.

Task 1 – Situation Assessment and Data Collection

Atrium will initiate the project with a web-based project kickoff meeting where our first activity will be to conduct initial fact-finding to better understand the key factors that are influencing Unitil’s cost of service situation, anticipated changes to its tariff services and rate structure since the last rate case, and to more fully appreciate the broader strategic, operating, and regulatory context within which the project is being conducted.

Specifically, we expect to review with Unitil material related to the following topics:

- All relevant background information related to regulatory proceedings in New Hampshire since Unitil’s last rate case, with a focus on any costing and rate design initiatives.
- Relevant NHPUC decisions from those regulatory proceedings to better understand key positions of the parties and precedents.
- Recent alternative costing methods and pricing proposals of other New Hampshire electric and gas distribution utilities to identify any new concepts, methodologies or approaches to which the Commission has been exposed since Unitil’s last rate case.
- Unitil’s current pricing objectives and strategies.

Finally, during this meeting, we will finalize the working relationship and communications protocols between Unitil and Atrium staff.

We understand from Unitil’s RFP that the Company will prepare the revenue requirement using Unitil’s in-house models and personnel. The winning bidder will be responsible for using the results of the revenue requirement to develop and support the Allocated Cost of Service Study (“ACSS”) and Marginal Cost Study (“MCS”). Further, the winning bidder must fully understand how the Commission has relied on these studies in rate case decisions and the Commission’s preferred methods. The following Tasks 2 and 3 describe Atrium’s approach to the performance of the ACSS and MCS.

Task 2 – Allocated Cost of Service Study

To perform the ACSS analysis, Atrium recommends using Atrium’s own Excel® based model. Our project team is thoroughly familiar with this model, which we’ve used frequently in other client engagements for both electric and gas cost allocation studies. Alternatively, Atrium can rely on the ACSS model utilized in Unitil’s 2019 Massachusetts rate case. Both models contain similar functionality, format, and content/layout of the summary sheets.



The ACSS model provides the revenue requirement detail associated with the cost to serve each rate class. The model develops the revenue requirement detail at an account or sub account level and has the flexibility to use a variety of Chart of Accounts (e.g. FERC, or company specific). Some categories of costs – generally rate base, expense and revenues - are assigned to each rate class on the basis of allocation factors; other categories – such as return and income taxes – are calculated for the class within the model. The allocation factors fall into three categories:

- *Direct assignments*: based on company accounting and records. For example, because utilities usually maintain accounting records of revenues collected by customer class, current revenues can be directly assigned to each rate class.
- *External allocators*: (a) based on externally obtained factors or (b) derived from special studies that are performed outside the ACSS model. Customers and volumes by rate class are an example of the first category. Special studies are needed for accounts which contain costs related to several activities or classes. For example, a special study is typically conducted to determine an allocation factor for meter costs using the number and type of meters by class and historic or replacement costs for the meter type.
- *Internal allocators*: that are developed from the results of allocation calculations performed in the study. For example, the ACSS model allocates Payroll taxes on the basis of Labor Expense, where the labor expense component of many individual expense and plant accounts is determined within the ACSS model.

The model keeps track of cost components on an unbundled functionalized basis, so that results can be reported for delivery service separate from production service; results are also separately reported for customer, demand and energy components.

Depending on the outcome of our discussions with Unitil during situational assessment in Task 1, we will be prepared to have our project team conduct the majority of the work required for the ACSS. Specifically, we will configure the ACSS model to accommodate the Company's gas total cost of service for the test year. We will review and refine, where it may be appropriate due to operational changes or other considerations since the prior ACSS was performed, each of the major allocation methods utilized in Unitil's most recently completed gas class cost of service study. We will then derive appropriate allocation factors to support the chosen allocation methods.

Finally, we will develop unitized revenue requirements by functional component and the costs of services on the Company's gas system for purposes of establishing a cost basis to evaluate and reconfigure, where deemed appropriate, existing rate structures and service offerings. Of note, Unitil's indirect gas costs (including local production capacity costs, liquified natural gas (LNG) storage capacity costs, bad debt expense, working capital carrying charges, cost of gas charge (COGC) reconciliation balances, supplier and pipeline refunds, and miscellaneous overhead costs) and revenue required for distribution rates will be separately identified within the Company's developed revenue requirement.



Atrium can adjust and modify the ACSS model reports and results to address the Company's internal needs and requirements. As a starting point, for purposes of preparing rate case filing documents that satisfy the Commission's requirements and preferences, we will plan to produce the following reports and schedules:

- Total Cost of Service by class, with return on rate base calculated by class at current rates:
 - Total Cost of Service with revenue requirements by class that would produce the proposed return on rate base for each class.
 - Total Cost of Service by class, with return on rate base calculated by class at proposed rates.
- Unbundled Cost of Service by class:
 - Distribution Cost of Service by class, to serve as the basis for the design of the base rates.
 - Allocator detail, by account or sub account, for all classes.

For purposes of Atrium's work effort, we have assumed that personnel from Unitil will be available to assist in the gathering of all the data needed for the special studies (e.g., service lines, meters, design day peaks by class, customer records and billing). Atrium will work in close collaboration with Unitil staff from the plant accounting, distribution engineering, customer service, production/supply, and load research areas of Unitil to produce the studies necessary to complete the ACSS.

Task 3 – Marginal Cost Study

Similar to the development of the ACSS in Task 2, Atrium recommends utilizing its own Excel® based MCS model; which will replicate the methods employed in Unitil's last gas rate case, Docket No. DG 17-070.1 Of the two commonly used methodologies for calculating marginal distribution investment costs, the first method is the forward-looking, system planning approach. The second method, which was employed in Unitil's prior gas rate case, uses statistical regression analysis.

Mr. Amen is familiar with the MCS methods employed recently in New Hampshire² (statistical regression and system planning) and elsewhere. Both methods are not without controversy, as evidenced by the testimony of witnesses for the Office of Consumer Advocate and the Staff of the NHPUC in the referenced proceedings. Mr. Amen has used versions of the system planning method in other jurisdictions (e.g., Oregon and Montana) where these methods are preferred. A goal of Atrium will be to increase the transparency of the analyses and workpapers compared to previously filed marginal cost studies.

Atrium will prepare a MCS to estimate marginal costs that are based on an analysis of the system's

¹ Unitil (Northern Utilities, Inc.), New Hampshire Public Utilities Commission, Docket No. DG 17-070, Exhibit DLG/PMN-1, Filed April 12, 2018

² DE 19-064 Liberty Utilities (Granite State Electric) Corp. 2016 and DE 19-057, Public Service Company of New Hampshire d/b/a Eversource 2019 Case: DE 16-383 & DE 19-064; Eversource Energy 2019 Case: DE 19-057



capital and operating cost response to (1) additional distribution demand and usage for customers and (2) additional customers. We will use engineering analyses together with parameters obtained from the ACSS, as appropriate and practical. Marginal distribution capacity-related costs will be estimated on an overall basis and adjusted to each rate class based on class load characteristics from available system class load data. Atrium will classify Unitil's distribution capacity-related plant additions and expenses in accordance with current Commission standards and according to Company practices.

Finally, given the results of Atrium's marginal distribution cost analyses, Atrium will calculate the marginal cost to provide distribution to each of the Company's rate classes, as appropriate.

For both Tasks 2 and 3, Atrium will prepare a presentation which will document the nature of our evaluation, the allocation alternatives considered, if any, and analysis performed, and present the modeling results and our recommendations, along with all supporting data.

- Conduct a web-based review session of cost allocation model inputs, parameters, and results with Unitil management personnel.
- Discuss our preliminary class revenue allocation recommendation for the purpose of revising the rates.
- Incorporate feedback any agreed upon cost allocation model and/or revenue allocation refinements.
- Produce a final set of ACSS and MCS Schedules for filing

Task 4 – Rate Design

Atrium will assist Unitil in developing its rate design proposals for each of its classes of service, in recognition of its COSS, business objectives, future financial expectations, and operational situation. The Atrium project team of consultants have experience with many alternative ratemaking concepts (e.g., Decoupling) and innovative rate designs.

Evaluating the appropriateness of rate design options for a gas utility involves the review of a number of areas that can affect the utility and its customers. To properly conduct this type of evaluation, Atrium expects to review each rate design option relative to a number of utility ratemaking considerations, including:

Impact on the Utility

- Fixed cost recovery
- Performance under various rate designs and/or recovery mechanisms
- Business and financial risks
- Perceptions by the financial and investment community
- Uncollectible account experience

Impact on the Customer

- Customer bills
- Energy conservation impacts and incentives



- New customer additions and potential fuel switching
- Fixed cost recovery from new customers
- Inter- and intra-class subsidies

Atrium has assisted a number of its utility clients to evaluate these types of ratemaking considerations, to decide on the best course of action to pursue, to prepare the necessary evidence to properly present the utility's rate design proposals, including the proposed Decoupling mechanism, and to provide the required regulatory support to achieve consensus among the interested parties and final approval from the regulator.

Atrium will work closely with Unitil staff to evaluate the appropriateness of each rate design alternative identified at the outset of the project, using various types of qualitative and analytical assessments, including:

- Suitability of the rate design option to the load characteristics of each rate schedule (e.g., average volume, design/peak day demands, annual load factor, etc.)
- Monthly and annual bill comparisons for selected types of customers
- Changes to Unitil's current level of margin recovery in each rate schedule
- Changes to Unitil's current inter-class and intra-class cross-subsidies

Task 5 – Weather, Sales and Revenue Normalization

Atrium will analyze Unitil's respective historical actual and normal weather data, as well as historical weather data sourced from the National Oceanographic and Atmospheric Administration ("NOAA") and determine the proper established Heating Degree Day ("HDD") basis for the establishment of normal weather on the Company's distribution system, to normalize its annual sales for purposes of determining pro forma revenues and billing determinants in its general rate case. The weather normalization analysis will include:

- Updating weather databases, prior analyses, and weather normalization models, as available.
- Calculate weather impacts and normalized rate class sales.
- Provide weather normalization documentation and supporting workpapers.

Mr. Amen has developed and provided with expert testimony pro forma revenue proofs, appropriate normal weather periods, resulting normalized and annualized billing determinants and proposed Weather Normalization Adjustments (WNA) in conjunction with the filing of general rate cases. Jurisdictions for this normalization experience can be found in the "Revenue Decoupling" task below.

Task 6 – Revenue Decoupling

Mr. Amen has provided expert testimony on various forms of decoupling, both full and partial, as well as related studies entered into evidence in regulatory proceedings, in the following jurisdictions:



- Arkansas and Oklahoma – Arkansas Oklahoma Gas Corporation (Summit Utilities)
- Colorado – Colorado Natural Gas (Summit Utilities)
- Delaware – Chesapeake Utilities Corporation
- Indiana – Northern Indiana Public Service Company (NiSource Inc.)
- Massachusetts – Western Massachusetts Electric (Eversource)
- New Mexico – Southwestern Public Service (Xcel Energy)
- Pennsylvania – PG Energy (UGI)
- Washington – Puget Sound Energy

Mr. Amen is familiar with the gas Revenue Decoupling Mechanism (“RDM”) that has been approved in New Hampshire for Liberty Utilities (EnergyNorth Natural Gas)³ and the requirement of New Hampshire gas and electric utilities to seek approval of a decoupling mechanism in their first distribution rate case after 2020. In the latter case, as part of a Settlement Agreement⁴, the Commission required New Hampshire gas and electric utilities to do the following:

“seek approval of a decoupling or other lost-revenue recovery mechanism as an alternate to the lost revenue adjustment mechanism (LRAM) in their first distribution rate cases after the first Energy Efficiency Resource Standard (EERS) triennium, 2018-2020, if not before.”

Atrium maintains a data base of approved Decoupling mechanisms throughout the state jurisdictions in the United States for purposes of discussing options with clients and for reference purposes in supporting testimony.

In addition, we typically perform a simulation of the operation of the selected decoupling methodology over an historical period, for each applicable customer class, as an illustration of “what if” the mechanism had been in place. The results of that simulation will illustrate both the impact on the customers’ bills and on the stability of the Company’s revenue recovery, which will form the basis for exhibits to the testimony.

Task 7 – Pre-Filed Direct Testimony

Atrium will prepare and file expert testimony and exhibits in Unitil’s upcoming rate case proceeding related to Tasks 2, 3, 4, 5 and 6. We envision our testimony will discuss and support the underlying theoretical, conceptual and methodological procedures utilized by Unitil in the development of its ACSS, MCS, and normalization adjustment mechanisms. Testimony will also present the results of the studies, discuss the implications of these results for purposes of evaluating interclass revenue and intra-class rate design relationships, and support revenue

³ Liberty Utilities Corp. (EnergyNorth Natural Gas) Revenue Decoupling Mechanism, approved by the Commission in Docket No. DG 17-048, Order No. 26122, April 27, 2018.

⁴ New Hampshire Public Utilities Commission (NHPUC), Gas and Electric Utilities, Energy Efficiency Resource Standard, Order Approving Settlement Agreement, approved by the Commission in Docket No. DE 15-137, Order No. 25,932, August 2, 2016



targets by class and rate design proposals.

With respect to Unitil's decoupling proposal, Atrium's decoupling testimony will address the ways in which the proposed mechanism addresses relevant considerations, such as the fundamental ratemaking challenges that harm both the Company and its customers; shortcomings of traditional utility ratemaking and how these shortcomings impact the Company; the structure of Unitil's proposed Decoupling mechanism; and the interests and objectives served by the Company's Decoupling proposal, including the Company's energy efficiency objectives.

Task 8 – Post Filing Support

Atrium will provide the following services to Unitil in support of its general rate case filing before the NHPUC:

- Provide post-filing support for the pre-filed testimony as expert witness during Unitil's rate proceeding.
- Provide analytical and/or testimonial support to rebut positions advocated by other parties.
- Assist in preparing responses to data requests and other informational requests.
- Draft data requests of opposing parties related to Atrium's sponsored testimony and exhibits.
- Participate in settlement discussions with members of Unitil's management team and legal counsel.
- Assist in preparing the technical aspects of Unitil's legal briefs and reviewing the briefs of other parties.



Fee Estimate

Our fees for the consulting services of Atrium are based upon the time spent on the assignment by our professional staff at the billing rates established for the individuals involved. In addition to fees for services, travel expenses and administrative expenses related to data acquisition and production of presentation materials or reports are billed to clients at our actual cost.

Based upon our current understanding of the scope of work to be performed and the schedule for the completion of the work, we estimate on a time and materials basis that professional fees for completion of Tasks 1 - 7 of the engagement will be approximately [REDACTED] which represents [REDACTED] consultant hours as detailed in **Appendix A** (provided separately as **Attachments 1 and 2**). This cost estimate for Tasks 1 - 7, through the filing of Unitil's rate case, is provided on a not-to-exceed basis. **Table 2** below provides a summary of the estimated hours by Tasks 1 – 7.

For Task 8, Atrium proposes to bill for this support on a time and materials basis at the billing rates set forth in **Table 3**, below. An estimate is provided in **Appendix A** for post-filing activities to provide the complete information requested however Atrium is unable to accurately estimate post-filing costs as they can vary from 30% of pre-filing costs to over 100% of pre-filing costs.

Table 2 Estimated Hours by Task

Staff Position	Hours	Fee Estimate
Task 1 – Situation Assessment and Data Collection	[REDACTED]	[REDACTED]
Task 2 – Allocated Cost of Service Study	[REDACTED]	[REDACTED]
Task 3 – Marginal Cost Study	[REDACTED]	[REDACTED]
Task 4 – Rate Design	[REDACTED]	[REDACTED]
Task 5 – Weather, Sales and Revenue Normalization	[REDACTED]	[REDACTED]
Task 6 – Revenue Decoupling	[REDACTED]	[REDACTED]
Task 7 – Pre-Filed Direct Testimony	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]

Table 3 Billing Rates

Staff Position	Hourly Rate
Project Assistant	[REDACTED]
Analyst	[REDACTED]
Senior Analyst	[REDACTED]
Consultant	[REDACTED]
Senior Consultant	[REDACTED]
Managing Consultant	[REDACTED]
Director	[REDACTED]
Managing Partner	[REDACTED]



Project Timing

Atrium understands Unitil intends to file its natural gas base rate case with the Commission on or before July 30, 2021. Atrium's proposed project schedule, provided as **Appendix B**, is based upon a project start date at the earliest convenience of Unitil following the Bid Award date of May 6, 2021, and an executed Rate Case Consulting Services Agreement and Mutual Confidential Non-Disclosure Agreement between Unitil and Atrium.

To initiate the project, we recommend a kickoff meeting, as described in Task 1, to include discussions of project deadlines, critical path tasks, assignment of responsibilities between Unitil and Atrium, and broad discussions of Unitil's costing, pricing and regulatory objectives. The specific timeline and critical milestone dates for these work tasks can be established in conjunction with the finalization of the workplan for this project.

We expect that once Unitil prepares a detailed workplan for its rate case planning and preparation process, we will work with Unitil staff to incorporate Atrium's work tasks for into the workplan to be sure all critical path items are identified and committed to by Unitil's rate case team and Atrium's team of consultants. **Appendix B** contains a schedule outlining the time required to accomplish the scope of work outlined in this proposal, as well as the estimate of hours by task and consultant.

Potential Conflicts

Atrium knows of no actual or potential conflict of interest that would prevent our firm from providing services to Unitil.

Contracting

We propose to perform the above services under the Unitil Rate Case Consulting Services Agreement and Mutual Confidential Non-Disclosure Agreement provided on April 28, 2021 through the Bonfire portal. This is similar to the agreement in place between Atrium Economics and Unitil Energy Systems, Inc. executed in November 2020.



Appendix A –Project Price Sheets

Area 1: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization **Attachment 1**

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	■		
Research	■■■		
Analyses or Studies	■■■■■		
Other Direct Costs (Testimony)	■■■■■		
Total Not To Exceed (through filing)		■■■■■	
Respond to Discovery	■■■■■		
Assist in the Interrogation of Testimony	■■■■■		
Prepare Rebuttal Testimony	■■■■■		
Attend Hearings	■■■■■		
Respond to In-Hearing Record Requests	■■■■■		
Assist in Drafting of Legal Brief	■■■■■		
Other Direct Costs	■		
Total Cost Estimates (post-filing)		■■■■■	
Grand Total			■■■■■

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.



Area 2: Revenue Decoupling Attachment 2

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	■		
Research	■■■■		
Analyses or Studies	■■■■■		
Other Direct Costs	■■■■■		
Total Not To Exceed (through filing)		■■■■■	
Respond to Discovery	■■■■■		
Assist in the Interrogation of Testimony	■■■■■		
Prepare Rebuttal Testimony	■■■■■		
Attend Hearings	■■■■■		
Respond to In-Hearing Record Requests	■■■■■		
Assist in Drafting of Legal Brief	■■■■■		
Other Direct Costs	■		
Total Cost Estimates (post-filing)		■■■■■	
Grand Total			■■■■■

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.



Appendix B – Fee and Timeline Detail

	Amen	Taylor	Macias	Hutchinson	Proj. Asst.		
Pre-Filing							Fee Total
Task 1 – Situation Assessment and Data Collection							
Kickoff Meeting/Refine Workplan							
Issue Initial List of DRs and Discuss Data Req's							
Additional Research on Past Precedents							
Task 2 – Allocated Cost of Service Study							
Study Methodological Outline							
Discuss Special Studies and Identify SMEs							
Conduct Special Studies and Develop Allocators							
Setup Model/Incorporate Rev Req							
Review/Refine Results							
Task 3 – Marginal Cost Study							
Study Methodological Outline							
Discuss Special Studies and Identify SMEs							
Setup Model							
Conduct Studies and Draft Model							
Review/Refine Results							
Task 4 – Rate Design							
Discuss Rate Design Options/Identify Objectives							
Revenue Apportionment							
Rate Design							
Task 5 - Weather, Sales and Revenue Normalization							
Analyze actual, historical and normal weather data							
Calculate weather impacts & normalized class sales							
Determine pro forma revs & billing determinants							
Provide weather normalization documentation							
Task 6 – Revenue Decoupling							
Review Past Precedent and Options with Unitil							
Outline Decoupling Approach							
Conduct Supporting Analyses							
Scenario Analyses							
Draft Adjustment Filings							
Task 7 – Pre-Filed Direct Testimony							
Draft ACS Portion of Testimony							
Draft MCS Portion of Testimony							
Draft Rate Design Portion of Testimony							
Draft Normalization Portion of Testimony							
Draft Revenue Decoupling Portion of Testimony							
Review and Refine Testimony							
Total Hours							
Total Fees							
Total Expenses @							
Grand Total							



[illegible]

Appendix C – Senior Team Member Resumes





ATRIUM ECONOMICS

Centered on Energy

Ronald J. Amen

Managing Partner, Atrium Economics LLC

Mr. Amen has over 40 years of combined experience in utility management and consulting in the areas of regulatory support, resource planning, organizational development, distribution operations and customer service, marketing, and systems administration.

He has advised gas, electric and water utility clients in the following areas: regulatory policy, strategy and analysis; cost of service studies (embedded and marginal cost analyses); rate design and pricing issues including time- of-use rates, revenue decoupling, weather normalization and other cost tracking mechanisms; resource strategy, planning and financial analysis; and business process design, evaluation and organizational structures. Mr. Amen has provided expert testimony in numerous state and provincial regulatory agencies, and the Federal Energy Regulatory Commission. Prior to establishing Atrium Economics in 2020, Mr. Amen's consulting experience included Director Advisory & Planning at Black & Veatch Management Consulting, LLC, Vice President of Concentric Energy Advisors, Inc. and Director with Navigant Consulting, Inc. His prior utility experience includes leadership of State and Federal Regulatory Affairs at two electric and gas utilities, and management positions in Regulatory Affairs, Information Systems and Distribution Operations.

EDUCATION

Bachelor of Science with Distinction, Business Administration, Finance and Economics, University of Nebraska, United States

YEARS EXPERIENCE

42

PROFESSIONAL ASSOCIATIONS

American Gas

Association

Southern Gas

Association

RELEVANT EXPERTISE

Financial Analysis;
Litigation Support;
Regulatory Support;
Strategy; Utility Operations

REPRESENTATIVE PROJECT EXPERIENCE

Regulatory Policy, Strategy and Analysis

Western Export Group (2019)

In a Nova Gas Transmission, LTD. (NGTL) Rate Design and Service Application before the Canadian National Energy Board, Mr. Amen led a consulting team supporting the interests of the Western Export Group, a group of nine utility companies located in the Western U.S. and British Columbia who are export shippers on the NGTL system.

Regulatory Commission of Alaska (2019 – 2020)

Part of a multi-functional team that assisted the Regulatory Commission of Alaska (RCA) in its



evaluation of the Chugach Electric Association, Inc's acquisition of the Municipal of Anchorage d/b/a Municipal Light & Power Department. Assisted the RCA with its evaluation of the long-term benefits of the transaction to ML&P and Chugach customers, the implication of terms and assumptions in various agreements, and the careful balance of the fiscal and regulatory implications for the customers of the combined entity.

CPS Energy (2017 – 2018)

Provided an overall review of the client's Strategic Roadmap to prioritize its multi-year regulatory initiatives. (e.g., changes in product and service offerings, restructuring of current rate classes, introduction of new rate structures, rate levels, and tariff provisions). Current pricing processes and platforms assessed to identify recommended enhancements to enable the development and implementation of dynamic pricing concepts. Assisted client with preparation of next rate case (e.g., costing and pricing analyses, load forecasting, internal communications, and stakeholder engagement).

FortisBC Energy, Inc. (2016 – 2018)

Performed an overall review of the client's Transportation Service Model. Analyzed the client's various midstream transportation and storage capacity resources used in providing balancing of transportation customers' loads. Review included the physical diversity, functionality and flexibility provided by the various capacity resources, and the cost impact caused by transportation customers' imbalance levels. Conducted an industry-wide benchmarking study of current industry-wide best practices, by regulatory jurisdiction, related to transportation balancing tariff provisions. Participated in stakeholder workshops and testified before the BCUC.

McDowell Rackner & Gibson Law Firm (2015 – 2016)

Provided due diligence services to the law firm in connection with a state utility commission investigation into the law firm client's gas storage and optimization activities. Provided an independent opinion as to the likely outcome of the Commission's ongoing investigation.

Gulfport Energy Corporation (2016)

Provided regulatory analysis and support to Gulfport Energy Corporation in the ANR Pipeline Company Natural Gas Act §4 rate proceeding before the Federal Energy Regulatory Commission (FERC). Analyzed as-filed cost of service and rate design to identify key cost of service, cost allocation, rate design and service related/tariff issues. Developed an integrated cost of service and rate design model to prepare studies on client issues. Prepared best/worst case litigation outcomes, discovery and evaluations of discovery of other parties. Analyzed FERC staff top sheets and settlement offers; and assisted in the preparation of settlement positions.

Confidential Financial / Energy Partners (2015)

Provided regulatory due diligence support for client related to a proposed merger with a multijurisdictional gas/electric company including an evaluation of the regulatory landscape in the various applicable state jurisdictions, recent regulatory decisions, and current regulatory issues.

Confidential International Energy Company (2014)

Provided regulatory due diligence support for client related to a proposed merger with a multijurisdictional gas company including an evaluation of the regulatory landscape in the various applicable state jurisdictions, recent regulatory decisions, and current regulatory issues.



Pacific Gas & Electric Company (2014)

Developed an extensive industrywide benchmarking study to determine the cost allocation and ratemaking treatment utilized by Local Distribution Companies (LDCs) in the United States for recovery of gas transmission costs. Benchmarked cost allocation and rate design utilized by Interstate/Intrastate Pipelines. Benchmarked how Industrial & Electric Generation customers are served with natural gas.

Public Service Company of New Mexico (2009-2010)

Provided case management, revenue requirement, cost of service and rate design support for general rate cases in the utility's two state regulatory jurisdictions. Issue management and policy development included an electric fuel and purchased power cost mechanism, recovery of environmental remediation costs for a coal fired power plant, and the valuation of renewable energy credits related to a wind power facility.

Confidential International Energy Company (2009)

Provided due diligence on behalf of client related to the purchase of a gas/electric utility, including a review of the regulatory and market-related assumptions underlying the client's valuation model, resulting in the validation of the model and identification of key business risks and opportunities.

Resource Planning, Strategy and Financial Analysis**Fortis BC Energy, Inc. (2011)**

Retained to help develop a gas supply incentive mechanism in cooperation with the British Columbia Utilities Commission staff and the company's other stakeholders. Provided an independent analysis of the utility's management of pipeline and storage capacity and supply. Part of this work entailed a review of the major markets in which the utility transacted, reviewing the size of trading activity at the major market hubs and reviewing the price indices for these markets.

Black Hills Colorado Electric Utility (2009)

Engaged as a member of a consultant team that served as the independent evaluator in a competitive solicitation for non-intermittent generation resources. Jointly recommended by the utility client, the staff of the utility commission and the state attorney general, the consulting team acted as an agent of the public utility commission monitoring and overseeing the solicitation, which included reviewing the request for proposals and solicitation process, including provisions of the power purchase agreement, preliminary review (economic and contractual) of bids received from the request for proposals, initial modeling of bids for screening, selection of bidders with whom to conduct negotiations and oversight of the negotiation process, and the ultimate selection of the winning bid. Provided due diligence review of all input data, preliminary and final model output, and output summaries. The team produced biweekly confidential reports to the commission regarding the process and its results.

NW Natural (2007-2008)

Assisted with the development of its long-term Integrated Resource Plan (IRP) for its Oregon and Washington service territories. The IRP included the evaluation of incremental inter- and intra-state pipeline capacity, underground storage, and two proposed LNG plants under development in the region.



Puget Sound Energy (2007)

Engaged to assist the client with the development of a natural gas resource efficiency and direct end-use strategy, an interdepartmental initiative focused on preparing a natural gas resource efficiency plan that optimizes customers' end-use energy consumption while furthering corporate customer, financial, environmental, and social responsibilities.

Puget Sound Energy (2002 – 2003)

Provided resource planning strategy and analysis for the company's Least Cost Plan, including a review of the company's underlying 20-year electric and gas demand forecasts. As a member of a consulting team, served as the client's financial advisor for the acquisition of new electric power supply resources. Conducted a multitrack solicitation process for evaluation of generation assets and purchase power agreements. Provided regulatory support for the acquisition.

Cost Allocation, Pricing Issues and Rate Design**Montana-Dakota Utilities and Great Plains Natural Gas (2020 – 2021)**

Mr. Amen provided cost of service, class revenue apportionment, rate design, and expert witness support for the gas utilities' general rate cases before the Montana Public Service Commission and North Dakota Public Service Commission. Testimony included theoretical principals and practical application of cost allocation, and rate design principles or objectives that have broad acceptance in utility regulatory and policy literature. Supported the Straight Fixed-Variable Rate Design (SFV) in North Dakota with analysis showing low-income residential customers would experience lower annual bills under the SFV rate design than a volumetric weighted rate design. Provided a presentation at a public input hearing and oral testimony at Commission hearings in both jurisdictions. Pending settlement in North Dakota includes SFV rate design.

Chesapeake Utilities Corporation (2020 – 2021)

Reviewed and evaluated Chesapeake's Swing Service Rider (SSR), which recovers intrastate pipeline capacity costs directly from all transportation customers, and the application of the current cost allocation methodology underlying the service for its Florida gas utilities, Central Florida Gas and Florida Public Utilities. Supported Chesapeake through three primary tasks; (1) Assessment of the factors influencing the current cost allocation method, its impact on various customer groups, and data collection, (2) Assessment of the appropriateness of alternative cost allocation methods and model the application to and impact on the SSR charges, and (3) Provided a report of the evaluation, modelling results and recommendations in a report and conducted a review session with Chesapeake management personnel.

Kansas City, KS Board of Public Utilities (2019 – 2020)

Provided expert witness testimony supporting the basis for a Green Energy Program, its objectives and overall benefits. Provide an assessment of how the program is aligned with best practices in design of Green Energy tariff programs nationally. Testimony also provided an assessment of how the program mitigates potential risks to the Board of Public Utilities and protects against subsidization of other rate classes.

NW Natural (2018 – 2019)

Provided cost of service, class revenue apportionment, rate design, and expert witness support for the



gas utility's general rate case before the Washington Utility and Transportation Commission (WUTC), filed in December 2018. Testimony included theoretical principals and practical application of cost allocation, and rate design principles or objectives that have broad acceptance in utility regulatory and policy literature.

Chesapeake Utilities Corporation (2018 – 2019)

Developed a Weather Normalization Adjustment (WNA) mechanism applicable to the monthly billings of Chesapeake's residential and general service customers. Sponsored the WNA mechanism through expert testimony filed with the Delaware Public Service Commission in January 2019. The testimony included a description of the WNA calculations; back-casting performance analyses, with bill impacts; a WNA tariff; and conceptual and evidentiary support for this ratemaking mechanism.

Louisville Gas & Electric Company and Kentucky Utilities Company (2018)

Engaged by LG&E and KU to conduct a study in support of a joint utility and stakeholder collaborative concerning economical deployment of electric bus infrastructure by the transit authorities in the Louisville and Lexington KY areas, as well as possible cost-based rate structures related to charging stations and other infrastructure needed for electric buses.

Summit Utilities – Colorado Natural Gas, Inc. (2018)

Engaged by Summit Utilities to develop and support with expert testimony an appropriate normal weather period for the client's five Colorado temperature zones, resulting normalized billing determinants, and a Weather Normalization Adjustment ("WNA") proposal in conjunction with the filing of a general rate case for its Colorado Natural Gas, Inc. subsidiary.

Westar Energy (2018)

Provided cost of service and expert witness support for the electric utility's general rate case filing before the Kansas Corporation Commission (KCC). The cost of service study determined the cost components for a new Residential Distributed Generation (DG) customer class that provided the basis for recommendations for establishing components of a sound, modern three-part rate design for this new Residential DG (roof-top solar) service, which was approved by the KCC.

Florida Public Utilities (Chesapeake Utilities) (2017 – 2018)

Provided a rate stratification study of the utility's commercial and industrial customer classes to facilitate the reconfiguration of the classes by size of service facilities, annual volume, and load factor. Reviewed the cost allocation bases and recommended alternatives for recovery of capital investments related to the utility's Gas Reliability Investment Program (GRIP).

Tacoma Power (2016 – 2018)

Provided cost of service and rate design support for the electric utility's general rate case filings, including support for recovery of fixed costs through fixed charges and impacts on low income customers. Provided recommendations as to specifications in the client's cost of service analysis (COSA) model for deriving Open Access Transmission Tariff rates, using FERC approved standards to guide the evaluation. Conducted an electric utility costing and pricing workshop for the PUB in October 2017; and participated with Tacoma Utilities staff in a comprehensive electric and water Rates and Financial Planning workshop in February 2018. Engagement was extended for the 2019 – 2020 rate filing, which incorporated the Black & Veatch municipal COSA model for costing and ratemaking



purposes. Currently working with Tacoma Power for the potential incorporation of financial forecasting capabilities and revenue requirements development into the COSA model. Future project work involves working on the re-design of the general service and industrial rate schedules, economic development rate strategies, demand response rates, and other innovative rate programs.

Tacoma Power (2017)

Engaged to review and assess current rates for 3rd Party Pole Attachments (PA), and more specifically, to determine and recommend if any rate adjustments were needed. Performed several tasks:

- Performed a market survey of rates charged by comparable utilities
- Reviewed current regulations on rate setting and practice for 3rd Party Pole Attachments as set forth by the Federal Communications Commission (FCC) and the State of Washington (WA), and the interpretation of such regulations in court decisions
- Reviewed industry best practices under the FCC, WA, and the American Public Power Association (APPA)
- Collected and reviewed data for cost-based fees including:
 - Application Fees
 - Non-Compliance Fees
- Reviewed cost data supplied by the City of Tacoma as relates to determining pole costs, and
- Performed modeling of rates under the FCC Model, the APPA model and the State of Washington shared model (50 % FCC Rate/ 50% APPA Rate).

BC Hydro (2016)

Provided research and analysis of the line extension policies of a select group of peer utilities in Canada with similar regulatory regimes as well as U.S. utilities based on their geographic relationship to the client. Conducted interviews with peer utilities to gather comparative information regarding their line extension policies and related internal procedures. Performed a comparative analysis of the various line extension policies from the selected peer group.

Cascade Natural Gas Corporation (2015 – 2019)

Provided cost of service and rate design support for several of the company's general rate case filings in its two state jurisdictions, 3 in Oregon and 2 in Washington. Conducted Long-run Incremental Cost Studies in the Oregon jurisdiction and embedded class allocated cost of service studies in the Washington jurisdiction. Performed benchmark analyses to compare each of the client's administrative and general (A&G) and operations and management (O&M) expenses, on a per-customer basis, to various peer groups. Analyses were performed for natural gas utilities and combination utilities with both electric and gas operations. Various iterations of the analyses were prepared to make the peer group of utilities more comparable to the characteristics of the client's utility operations. Represented the client's interests in a Washington generic rulemaking proceeding on the subject of electric and gas cost of service methodologies and minimum filing requirements.



Chesapeake Utilities (2015 – 2016)

For its Delaware jurisdiction, provided cost of service and rate design support in the client's general rate case proceeding, including expert witness testimony in support of the utility's proposed gas revenue decoupling mechanism.

Homer Electric Association / Alaska Electric and Energy Cooperatives (2015)

Represented clients in an ENSTAR gas general rate proceeding. Testimony discuss accepted industry principles of revenue allocation and rate design, including the applicability to and alignment with ENSTAR's revenue allocation and rate design proposals for large power and industrial customers. Provided a critique of certain methodological aspects of ENSTAR's Cost of Service study, proposed revenue allocation, and rate design relating to the various large power and industrial customers.

Arkansas Oklahoma Gas Corporation (2002, 2003, 2004, 2007, 2012, 2013)

Provided cost of service and rate design support for several of the company's general rate case filings in its two state jurisdictions and in support of Section 311 transportation filings (2007, 2010) before the Federal Energy Regulatory Commission. Provided related research, design and expert witness testimony in support of a Revenue Decoupling mechanism in one jurisdiction and a Weather Normalization Adjustment mechanism in the other jurisdiction, along with a significant increase in fixed charges and the introduction of demand charges for the company's largest customer classes. Conducted a pre-filing "decoupling" workshop for the utility commission staff.

Northern Indiana Public Service Company (NiSource) (2009 – 2010, 2013, 2017)

Conducted class allocated cost of service studies for the client's natural gas (including two other affiliate gas utilities) and electric operations. Work included reconfiguring the Company's commercial and industrial customer classes according to size of load and customer-related facilities. Rate design was modernized to recover a greater portion of fixed costs via fixed monthly customer and demand-based charges, a transition to a "Straight-Fixed Variable" form of rate design. Industry research was provided on alternative rate designs for the electric service, including Time-of-Use rates and Critical Peak Pricing. Served as an expert witness on behalf of the client in four general rate cases before the Indiana Utility Regulatory Commission.

Southwestern Public Service Company (Xcel) (2012)

Retained to conduct a study to estimate the conservation effect of replacing its existing electric residential rate design with an alternative rate design such as an inverted block rate design. Reviewed inclining block rate structures that have actively been employed in other jurisdictions and also reviewed technical and academic literature to assess the elasticity of electricity demand for residential customers in the southwestern U.S. Analyzed 2009-2011 residential data to determine what sort of conservation effect the company may expect by implementing an inclining block rate structure. Provided an overview of alternative rate structures which may also promote conservation effects, such as seasonal rates, three-part rates and time-of-use (TOU) rates, and considered the competing incentives of promoting conservation and cost recovery, without specific rate mechanisms to address this conflict.

Atlantic Wallboard LP and Flakeboard Company Limited (JD Irving) (2012)

Represented clients in an Enbridge Gas New Brunswick Limited Partnership ("EGNB") general rate proceeding. Testimony responded to the 2012 allocated cost of service study and rate design that was



submitted to the New Brunswick Energy and Utilities Board by EGNB. Testimony also provided benchmark information regarding EGNB's distribution pipeline infrastructure in New Brunswick, CA.

Western Massachusetts Electric Company (Northeast Utilities) (2010 – 2011)

Supported utility in its decoupling proposal for the company's general rate case. Work included: 1) research on the financial implications of decoupling; 2) identification of decoupling mechanism details to address company and regulatory requirements and objectives; 3) identification of rate adjustment mechanisms that would work together with the company's proposed decoupling mechanism; and 4) preparing pre-filed testimony and testifying at hearings in support of the company's decoupling and rate adjustment proposals. The proposed rate adjustment mechanisms included an inflation adjustment mechanism based on a statistical analysis, and a capital spending mechanism to recover the costs associated with capital plant investment targeted to improving service reliability.

Interstate Power & Light (Alliant Energy) (2010 – 2011)

Conducted class allocated cost of service studies for a Midwestern electric utility's Minnesota electric system. Work included reconfiguring the company's customer classes for cost of service purposes to collapse end-use based classes with the classes to which they would be eligible. Cost of service studies were performed on a before-and-after basis for the existing and proposed classes. The cost of service studies included a fixed/variable study for production costs, and a primary/secondary study for poles, transformers and conductors. Performed a TOU analysis to determine the appropriate rate differentials for its peak and off-peak rates. Served as an expert witness on behalf of the client in a general rate case before the Minnesota Public Service Commission.

National Grid (2010)

Conducted class allocated cost of service studies for the client's Massachusetts natural gas operations. This task included combined gas cost of service studies for the consolidation of four gas service territories into two gas utility subsidiaries. During interrogatories, performed four separate allocated cost of service studies for each gas service territory. Work included reconfiguring the company's commercial and industrial customer classes according to size of load and customer-related facilities. Served as an expert witness on behalf of the client in consolidated general rate cases before the Massachusetts Department of Public Utilities.

Puget Sound Energy (2001 – 2002, 2006 – 2007, 2019 – 2020)

In three Washington general rate proceedings, provided cost of service and rate design support, including expert witness testimony in support of the utility's proposed revenue decoupling mechanism. Conducted research on accelerated cost recovery mechanisms for infrastructure replacement, and electric power cost adjustment mechanisms. In the latest general rate case, Mr. Amen is sponsoring expert testimony on a proposed revenue attrition adjustment to the client's revenue requirement.

Utility System Operations and Organizational Development

Philadelphia Gas Works (2017, 2020)

Engaged to provide an independent consulting engineer's report to be included as an appendix to the official statement prepared in connection with the issuance of the City of Philadelphia, Pennsylvania Gas Works Revenue Bonds. The evaluation of the PGW system included a discussion of organization, management, and staffing; system service area; supply facilities; distribution facilities; and the utility's



Capital Improvement Plan (CIP). Our report also contained: (a) financial feasibility information, including analyses of gas rates and rate methodology; (b) projection of future operation and maintenance expenses; (c) CIP financing plans; (d) projection of revenue requirements as a determinant of future revenues; (e) an assessment of PGW's ability to satisfy the covenants in the General Gas Works Revenue Bond Ordinance of 1998 authorizing the issuance of the Bonds; and (f) information regarding potential liquefied natural gas ("LNG") expansion opportunities.

Puget Sound Energy (2013 – 2014)

Engaged to perform a review of its project management and capital spending authorization processes (CSA). The overall project objectives were to educate project management (PM) staff as to the importance and relevance of regulatory prudence standards, evaluate existing PM processes along with newly introduced corporate CSA processes, and propose PM and corporate process and documentation efficiencies. This task was accomplished through 1) a situational assessment and risk review; 2) analysis of project management practices; and 3) development of common documentation for the CSA and PM processes.

Puget Sound Energy (2012 – 2013)

Engaged to perform a review of how the company compares to similarly-situated utilities in the areas of the underlying capitalized costs related to new customer additions ("new business investment") and the management policies and practices that influence the new business capital investment. Examined the interrelationships of our client's management policies and practices in the functional areas related to new business investment and developed an understanding of the nature of the costs captured by the new business investment process. Benchmarked those costs relative to peers' cost factors and management capital expenditure practices and performed targeted peer group interviews on our client's behalf. The review identified certain trends and/or interrelationships between management policies and practices, as well as other exogenous factors, and the resulting impact on new business investment.

Puget Sound Energy (2011 – 2012)

Engaged to perform a review of its electric transmission planning and project prioritization process. The emphasis of the review was to determine if the process implemented by the client could be expected to meet the regulatory standard of prudence, as adopted by the state regulatory commission. Reviewed the prudence standard adopted by the commission in several recent regulatory proceedings, supplemented by our knowledge of the prudence standard adopted at a national level and in other states. The engagement included two phases: 1) an initial situation assessment of the existing process employed by the client, and 2) a review of the historic implementation of that process by reviewing a sampling of transmission projects. Compiled and provided examples of capital planning documents and procedures, viewed as "best practices," from other electric utilities and other relevant transmission entities.

Alliant Energy (2011 – 2012)

Provided audit support for one of the company's gas and electric utilities, Interstate Power & Light, during a management audit ordered by one of its two regulatory jurisdictions. Conducted a pre-audit of distribution operations and resource planning processes to provide the client with potential audit issues. Assisted the client throughout the audit process in responding to information requests, preparing company executives and management personnel for audit interviews, and management of preliminary



audit issues and findings by the independent audit firm.

Ameren Illinois Utilities (2009 – 2010)

Performed a number of benchmark analyses to compare each of the client's A&G and O&M expenses, on a per-customer basis, to various peer groups conducted for the client's natural gas and electric operations. Analyses were performed for natural gas, electric and combination utilities with both electric and gas operations. Various iterations of the analyses were prepared to make the peer group of utilities more comparable to the characteristics of the client's utility operations. Served as an expert witness on behalf of the client in a consolidated general rate case proceeding of its three utility subsidiaries before the Illinois Commerce Commission.

EXPERT WITNESS TESTIMONY PRESENTATION

- Alaska Regulatory Commission
- Arkansas Public Service Commission
- British Columbia Utility Commission (Canada)
- Colorado Public Utility Commission
- Connecticut Department of Public Utility Control
- Delaware Public Service Commission
- Illinois Commerce Commission
- Indiana Utility Regulatory Commission
- Kansas Corporation Commission
- Manitoba Public Utilities Board (Canada)
- Massachusetts Department of Utilities
- Minnesota Public Utilities Commission
- Missouri Public Service Commission
- Montana Public Service Commission
- New Brunswick Energy and Utilities Board (Canada)
- New Hampshire Public Utilities Commission
- North Dakota Public Service Commission
- Oklahoma Corporation Commission
- Oregon Public Utility Commission
- Pennsylvania Public Utility Commission
- Washington Utilities and Transportation Commission
- Federal Energy Regulatory Commission



SELECTED PUBLICATIONS / PRESENTATIONS

“Enhancing the Profitability of Growth,” American Gas Association, Rate and Regulatory Issues Seminar, April 4 - 7, 2004

“Regulatory Treatment of New Generation Resource Acquisition: Key Aspects of Resource Policy, Procurement and New Resource Acquisition,” Law Seminars International, Managing the Modern Utility Rate Case, February 17 - 18, 2005

“Managing Regulatory Risk – The Risk Associated with Uncertain Regulatory Outcomes,” Western Energy Institute, Spring Energy Management Meeting, May 18 - 20, 2005

“Capital Asset Optimization – An Integrated Approach to Optimizing Utilization and Return on Utility Assets,” Southern Gas Association, July 18 - 20, 2005

“Resource Planning as a Cost Recovery Tool,” Law Seminars International, Utility Rate Case Issues & Strategies, February 22 - 23, 2007

“Natural Gas Infrastructure Development and Regulatory Challenges,” Southeastern Association of Regulatory Utility Commissioners, Annual Conference, June 4 – 6, 2007

“Resource Planning in a Changing Regulatory Environment,” Law Seminars International, Utility Rate Cases – Current Issues & Strategies, February 7 - 8, 2008

“Natural Gas Distribution Infrastructure Replacement,” American Gas Association, Rate Committee Meeting and Regulatory Issues Seminar, April 11 – 13, 2010

“Building a T&D Investment Program to Satisfy Customers, Regulators and Shareholders,” SNL Webinar, March 27, 2014

“Utility Infrastructure Replacement; Trends in Aging Infrastructure, Replacement Programs and Rate Treatment,” Large Public Power Council, Rates Committee Meeting, August 14, 2014

“Natural Gas in the Decarbonization Era, Gas Resource Planning for Electric Generation,” EUCI, January 22-23, 2020





ATRIUM ECONOMICS

Centered on Energy

John D. Taylor

Managing Partner, Atrium Economics LLC

Mr. Taylor is a utility pricing expert with experience developing cost of service studies for both electric and gas utilities and transmission companies. He has deep experience with developing residential and commercial rates, analyzing midstream transportation and storage capacity resources, and assessing the relationship between price signals and the adoption of distributed generation assets.

He has filed testimony as an expert witness on class cost of service studies for both electric and natural gas utilities, return on equity, and on the appropriate use of statistical analysis during audit testing. Mr. Taylor has supported projects involving financial analysis, regulatory support and strategy, market assessment, litigation support, and organizational and operations reviews. He has an expert knowledge of cost allocation principles for utility cost of service studies and for affiliate transaction and service agreements. Mr. Taylor's work often involves providing support for regulatory proceedings by conducting various studies and analyses related to revenue requirements, affiliate transactions, class cost of service, and cash working capital studies. He has also been involved in the sale of generating assets as sell side advisors, supporting due diligence efforts, financial analyses, and regulatory approval processes.

EDUCATION

M.A., Economics, American University

B.A., Environmental Economics, University of North Carolina at Asheville

YEARS EXPERIENCE

15

RELEVANT EXPERTISE

Utility Costing and Pricing, Expert Witness Testimony, Transaction Facilitation, Revenue Requirements, Statistics, Valuation, Market Studies, Rate Case Management, New Product and Service Development, Strategic Business Planning, Marketing and Sales

RECENT PROJECT EXPERIENCE

Puget Sound Energy (2019-2020)

Expert witness for gas class cost of service study and rate design. Rebuttal filing will be made on January 15th. Also supported attrition analysis and testimony of another witness.

Fitchburg Gas and Electric Light Company – MA Electric Division (2019-2020)

Expert witness for gas class cost of service study and rate design. Direct testimony filed on December 17, 2019.

EPCOR Distribution & Transmission Inc. (2019-2020, ongoing)

Conducted a minimum distribution system study for EPCOR. Project may continue with a full class cost of service study and rate design. Also, provided a review of EPCOR's affiliate cost



allocation, specifically their master overhead pool allocation, that was filed with their 2020-2022 TFO Tariff Application.

[Dominion Energy West Virginia \(2019-2020\)](#)

Setup gas class cost of service study in fall of 2019 and will be updating that study for an upcoming June filing where I will support expert testimony.

[Dominion Energy East Ohio \(2018-2019\)](#)

Setup gas class cost of service study in the 2018/2019 winter. Project on hold while Dominion is preparing for West Virginia filing.

[Chesapeake Utilities Corporation \(Delaware, Florida\) \(2015-2018\)](#)

Various rate analyses for Florida Public Utilities a company wholly owned by Chesapeake utilities. Conducted gas cost of service study for their Delaware division in 2015 and a Weather Normalization Adjustment filing in 2019. The WNA was put on hold for a full rate case in early 2020.

[CenterPoint Energy / Vectren Ohio \(2018-2020\)](#)

Supported class cost of service and rate design testimony for Vectren Ohio in 2018 and supported their internal coincident peak study in 2019. This engagement will likely continue in 2020 with supporting Vectren Energy Indiana with cost of service and rate design testimony.

[Liberty Utilities / Enbridge Gas New Brunswick \(2018-2020\)](#)

Reviewed line extension policies and economic development rates in 2018, supported revenue mitigation/apportionment in 2019, and will likely support cost of service and rate design realignment in 2020.

[Western Export Group \(2019\)](#)

Supporting the Western Export Group with the review and response to NOVA Gas Transmission's System Rate Design and Services Application before the National Energy Board.

[Central Nebraska Public Power and Irrigation District \(2017\)](#)

Provide cost of service testimony for Central Nebraska Public Power and Irrigation District before the FERC.

[PREPA Bondholders \(2018-2019\)](#)

Provide ongoing support to PREPA bondholders relating to various restructuring efforts occurring in Puerto Rico. Review draft rules, provide comments, and work with outside counsel to draft responses.



LG&E and KU (2018-2019)

Retained by LGE and KU to work with stakeholder in the development of a report summarizing the current rates and rate options relating to the electrification of bus fleet for the local transit authorities.

Gaz Metro / Energir (2018)

Comprehensive line extension review and analyses supported with expert report and testimony (provided by another witness) before the The Régie de l'énergie. I was the project manager and provided subject matter expertise but was not the witness.

BY Hydro (2016-2017)

Line extension review and analyses. Study focused on 10 other peer electric utilities and line extension policies were compared and contrasted with a focus on several characteristics including upstream reinforcements.

FortisBC (2016 – 2018)

Report relating to review of 'Transportation Service Model' - midstream transportation and storage capacity resources used in providing balancing of transportation customers' loads. Resulted in expert report and oral testimony before the British Columbia Utilities Commission.

Tacoma Public Utilities (2017-2019)

Reviewed and supported their 2017 – 2018 Rate Case Filing and developed specific proposals for that filing including cost allocation assumptions and methodologies. Updated streetlighting rates to incorporate LED lighting technologies.

CPS Energy (2018)

Class cost of service study review, rate design review, and line extension review for both gas and electric operations. Completed report on geographically differentiated rates for CEO's office.

NIPSCO Gas Rate Case (2017 – 2018)

Supported the development of NIPSCO's gas cost of service study and rate design for the first filing that allowed for a forecasted test year and the roll in of TDISC costs into base rates. I was the project manager and provided subject matter expertise but was not the witness.

Homer Electric Association / Alaska Electric Cooperatives (2015)

Supported the review of ENSTAR's cost of service study, revenue allocation, and rate design relating to various large power and industrial customers.



Habersham Electric Cooperative (2019)

Conducted 5 year financial forecast and class cost of service study accompanied with report. Also, developed line extension report with suggested modifications.

Brownsville Public Utilities Commission (2019)

Updated streetlight rates based on previous 2015 cost of service study using unit costs, replacement costs, and carrying costs for new installations of LED lights.

REPRESENTATIVE EXPERIENCE

Management and Development

- Able to quickly grasp new material, thoroughly analyze data, and synthesize ideas and a skilled communicator with ability to effectively explain complex concepts to peers and stakeholders.
- Enthusiastic leader with the ability to bridge gaps between team collaboration and independent focus while being passionate about developing and empowering employees by appropriately leveraging their skills.
- Annually responsible for managing six to ten active consulting engagements with total annual revenues of \$1.5M. Also, work as the single subject matter expert or with other experts on these engagements and am able to bill \$525k for my time spent on these engagements.
- Participated in all phases of business development and marketing: research, cold calling, client relationship management, marketing materials, proposals, and negotiating terms and budgets.
- Authored and provided educational presentations for internal and external training on various topics. Updated essential Excel workbooks used for delivering consulting engagements.
- Responsible for workload management of all associates, analyst, assistant consultants, and consultants: ensuring projects are fully staffed and individuals are utilized effectively.

Rate Design and Regulatory Proceedings

Mr. Taylor has worked on dozens of electric and gas rate cases including the development of revenue requirements, class cost of service studies, and projects related to utility rate design issues. Specifically, he has:

- Lead expert and witness for class costs of service studies across North America and worked on dozens of other class cost of service and rate design projects for other lead witnesses.
- Developed WNA mechanism for a gas utility including back casting results and supporting expert witness testimony and exhibits.



- Developed revenue requirement model to comply with a new performance based formula ratemaking process for a Midwest electric utility.
- Supported the developed of time of use rates, demand rates, economic development rates, load retention rates, and line extension policies.
- Analyzed and summarized allocation methodology for a shared services company.
- Assessed the reasonableness of costs through various benchmarking efforts.
- Led the effort to collect and organize plant addition documentation for six Midwest utilities associated with the state commission's audit of rate base.
- Supported lead-lag analyses and testimonies.
- Analyzed customer usage profiles to support reclassification of rate classes for a gas utility.
- Helped conduct a marginal cost analysis to support rate design testimony.

Litigation Support and Expert Testimony

Mr. Taylor has testified in several cases on class cost of service studies and statistical audit methods. He has also supported numerous other expert testimonies. Specifically, he has:

- Filed testimony as an expert witness on allocated class cost of service studies for both electric and gas utilities.
- Filed testimony as an expert witness on the application of statistical analysis.
- Filed testimony before FERC on the rate of return for an Annual Transmission Revenue Requirement and participated in FERC settlement conferences.
- Part of two person expert witness team that provided an expert report to the British Columbia Utilities Commission on the use of facilities for transportation balancing services for Fortis BC.
- Part of two person expert witness team that provided an expert report on affiliate transactions and capitalized overhead allocations for Hydro One on three separate occasions.
- Sole expert for expert report on affiliate allocations for Alectra utilities, the second largest publicly owned electric utility in North America. This was conducted shortly after the merger of four distinct utilities.
- Sole expert for expert report on the allocation of overhead costs between transmission and distribution businesses for EPCOR.

Transaction Experience

Mr. Taylor has been involved with several generating asset transactions supporting both buy side and sell side analysis and due diligence. His work has included:

- Worked as buy side advisor for a large water utility in the mid-Atlantic region including supporting the review of revenue requirements, rates, and forecasts.



- Helped facilitate and manage processes for a nuclear plant auction by processing Q&A, collecting relevant documentation and managing the virtual data room for auction participants.
- Supported the auction process for steam and chilled water distribution and generation assets in the Midwest.
- Supported the development of a financial model to ascertain the net present value of several competing wholesale power purchase agreements and guided the client with a decision matrix for the qualitative aspects of the offers.
- Provided research on comparable transactions, previous mergers and acquisitions, and potential transaction opportunities for several clients.

Financial Analysis and Market Research

Other financial analysis and market research Mr. Taylor has conducted include:

- Estimated the rate impact and costs associated with moving California energy market to 100% renewable.
- Assessed the consequences of a divestiture on the cost of service model for a New England gas distribution company.
- Developed distributed CNG/LNG market studies for two separate utilities and two separate competitive market participants.
- Modeling alternative mechanisms for the allocation of overhead costs to a nuclear plant.

EXPERT WITNESS TESTIMONY PRESENTATION

United States

- Delaware Public Service Commission
- Federal Energy Regulatory Commission
- Illinois Commerce Commission
- Indiana Utility Regulatory Commission
- Maine Public Service Commission
- Massachusetts Department of Public Utilities
- Minnesota Public Utilities Commission
- Oregon Public Utility Commission
- Pennsylvania Public Utility Commission
- Washington Utilities and Transportation Commission
- Public Service Commission of West Virginia

Canada

- Alberta Utilities Commission
- British Columbia Utilities Commission
- Ontario Energy Board





ATRIUM ECONOMICS

Centered on Energy

Gregory E. Macias

Managing Consultant

Mr. Macias is a utility rate and regulatory expert with experience developing cost of service studies, depreciation studies and regulatory research. He has deep experience with developing residential and commercial rates, conducting depreciable life and accrual rate analysis, and participating in utility regulatory proceedings. Mr. Macias has supported projects involving financial analysis, regulatory support and strategy, utility plant valuation, and organizational and operations reviews. He has an expert knowledge of cost allocation principles for utility cost of service studies and for depreciation expense and accrual rates. Mr. Macias has also been involved in engineering reports supporting municipal bonds issuances and operations reviews of natural gas utilities. Mr. Macias has testified as an expert witness in multiple state jurisdictions on utility rate issues.

Mr. Macias has been providing consulting services to utility clients for fourteen years. Prior to beginning his consulting career, Mr. Macias spent ten years with the Missouri Public Service Commission conducting utility plant depreciation studies and performing LDC natural gas safety and compliance inspections. Mr. Macias's office location is Kansas City, MO

EDUCATION

B.S. Civil Engineering,
University of Missouri, 1996

YEARS EXPERIENCE

13

RELEVANT EXPERTISE

Cost of Service,
Depreciation, Financial
Analysis, Rate Design,
Valuation, Expert Witness
Testimony, Revenue
Requirements, Transaction
Due Diligence, Affiliate Cost
Allocation

REPRESENTATIVE PROJECT EXPERIENCE

CenterPoint Energy Minnesota Gas; Cost of Service and Rate Design; Minneapolis, Minnesota; 2016-In-Progress

Project Manager. Mr. Macias was the lead analyst of a class cost of service study and rate design in connection with a natural gas rate relief request before the Minnesota Public Utilities Commission. This study also included development of allocation factors, and preparation of exhibits for expert witness testimony.

Cascade Natural Gas Company; Cost of Service and Rate Design; Kennewick, Washington; 2014-In-Progress

Project Manager. Mr. Macias is project manager for Cascade's class cost of service studies in connection with natural gas rate cases before the Oregon Public Utility Commission, and the Washington Utilities and Transportation Commission. Services included a marginal cost of service study as required in the state of Oregon, an imbedded cost of service study for the state of Washington and rate design recommendations in both jurisdictions. Additionally, Black & Veatch prepared an analysis of



Administrative and General Expense as compared to other gas utilities both regionally and nationally for support in Cascade's rate case.

Pensacola Energy; Rate Study and Annual Operations Report; Pensacola, Florida; 2008-In-Progress

Project Manager. Project Manager for a natural gas rate study for Pensacola Energy, a city-owned gas utility, in 2011 and 2015. The comprehensive studies included a five-year projection of Pensacola Energy's financial position, a cost of service analysis to evaluate the cost responsibility for each of the various classes of customers served, and the development of recommended rate charges to recover the costs of providing service from the respective classes of customers. Mr. Macias also serves as the project manager and lead consultant for the Gas System Annual Report prepared for Pensacola Energy. The report documents Black & Veatch's interviews, site visits and review of records pertaining to the management and operation of Pensacola Energy to determine that the system is operated in a safe and reliable manner, is in compliance with state and federal regulations, and is in compliance with the covenants sets forth in the city's bond resolutions.

Philadelphia Gas Works (PGW); Engineer's Report; Philadelphia, Pennsylvania; 2009-2017

Project Manager. Project Manager for the Independent Consultant's Engineering Report developed for PGW's issuance of Gas Works revenue Bonds. Mr. Macias has previously assisted with PGW's revenue bond issues in 2009, 2011, 2013, 2015, and 2016. The engineer's report summarizes the findings of a study of PGW's facilities, management, operations, gas supply, rates and marketing, and customer service, and assessed the financial feasibility of the bond issue.

Greenville Utilities Commission (GUC); Rate Study; Greenville, North Carolina; 2011-2015

Consultant. Mr. Macias assisted GUC with a multiyear natural gas rate study. The comprehensive study included a 15-year projection of GUC's financial position, a cost of service analysis to evaluate the cost responsibility for each of the various classes of customers served, and the development of recommended rate charges to recover the costs of providing service from the respective classes of customers. Mr. Macias assisted GUC with a compressed natural gas (CNG) filling station feasibility analysis. The feasibility of installing a CNG filling station for use as transportation fuel was analyzed under multiple scenarios of varying fleet usage, incentives and subsidies.

Philadelphia Gas Works; Depreciation Rate Study; Philadelphia, Pennsylvania; 2010-2015

Project Manager. Project Manager for the development of a depreciation rate study for Philadelphia Gas Works' properties. The depreciation study was filed with the Pennsylvania Public Utility Commission.

The Empire District Electric Company; Depreciation Rate Study; Joplin, Missouri; 2010-2015

Lead Consultant/Project Manager. Lead Consultant and Project Manager in the development of the depreciation rate study for The Empire District Electric Company. The completed studies were filed before the Missouri Public Service Commission.

Department of Public Utilities (DPU); Cost of Service Analysis; Orangeburg, South Carolina; 2007-2015

Consultant. Mr. Macias assisted with numerous projects for the gas, electric, water and wastewater



divisions for the DPU. Mr. Macias served as the lead consultant on DPU's gas, electric, water and wastewater rate studies. Mr. Macias also assisted on Gas Division projects related to gas supply and demand studies, development of purchased gas cost tracking models, feasibility studies, cost of service and rate design. He also assisted on Electric Division projects related to electric supply and demand studies, purchased power cost analysis, cost of service and rate design. Water and wastewater assistance included cost of service and rate design.

Ameren Missouri; Life Span of Coal Fired Steam Generating Stations; St. Louis, Missouri; 2009-2014

Project Manager. Mr. Macias was project manager for Black & Veatch testimony and exhibits on behalf of Union Electric Company, doing business as (d/b/a) Ameren Missouri, before the Missouri Public Service Commission regarding the appropriate life span to use for coal fired steam generating stations for depreciation purposes. Mr. Macias lead the research of actual industrywide historical retirement experience as well as the age of existing generating units. Mr. Macias assisted in developing recommended retirement dates for each unit based on consideration of current condition, currently installed and planned environmental controls, then current environmental requirements and prospective requirements. Recommended retirement dates were used in developing depreciation expense rates. Mr. Macias lead the drafting of the report on Life Expectancy of Coal Fired Power Plants. Mr. Macias assisted in drafting testimony and exhibits on behalf of Union Electric Company, d/b/a Ameren Missouri regarding the appropriate life span to use for coal fired steam generating stations for depreciation purposes.

The Empire District Gas Company; Depreciation Rate Study; Joplin, Missouri; 2008-2014

Lead Consultant/Project Manager. Lead Consultant and Project Manager in the development of the depreciation rate study for The Empire District Gas Company in 2013. Mr. Macias also assisted Empire Gas with its 2008 depreciation study, which was used in connection with filing for rate increase before the Missouri Public Service Commission.

Summit Natural Gas of Missouri, Inc.; Depreciation Rate Review; Hollister, Missouri; 2013

Project Manager/Lead Consultant. Project Manager and Lead Consultant in the depreciation rate review for Summit Natural Gas of Missouri's ("Summit") properties in 2013. At the time of the study, Summit was a relatively new natural gas utility and the Missouri Public Service Commission had ordered Summit to conduct a "non-statistical" depreciation review of its property. The resulting report was filed as part of Summit's 2013 rate case with the Missouri Public Service Commission.

Columbia Gas of Kentucky; Cost of Service Study; Kentucky; 2013

Project Manager. Project Manager of a class cost of service study in connection with a natural gas rate case before the Public Service Commission of Kentucky. Mr. Macias prepared the cost of service study using Black & Veatch's proprietary "Gas Cost of Service Model." This study included development of allocation factors, and preparation of exhibits for Black & Veatch expert witness testimony.

Confidential Client; Federal Energy Regulatory Commission (FERC) Rate Filing Strategy; United States; 2013

Project Manager. Mr. Macias served as project manager to assist a confidential large integrated energy company on FERC regulatory and rate-setting strategy for its largest FERC-regulated transmission asset. Consulting services included cost of service, rate design, rate of return on common stock, rate base



determination, and FERC rate setting steps and regulatory policy.

Confidential Client; Electric Retail Tariff Review; United States; 2013

Consultant. Mr. Macias helped a confidential client review its electric retail distribution tariff offerings. The purpose of the review was to identify any recommended changes that would assist in achieving tariff-related goals and overall business objectives. As part of this effort, Mr. Macias developed rate analytic models to evaluate the impact of potential tariff changes and to evaluate rate features offered by other peer companies in region.

Missouri Gas Energy; Depreciation Rate Study; Kansas City, Missouri; 2010-2013

Project Manager/Lead Consultant. Project Manager and Lead Consultant in the development of the depreciation rate study for Missouri Gas Energy's properties in 2010 and 2013. The studies reports' were filed with the Missouri Public Service Commission.

Interstate Power and Light Company (IPL); Cost of Service Study; Cedar Rapids, Iowa; 2012

Project Manager. Project Manager for a cost of service study in connection with IPL's natural gas rate case before the Iowa Utilities Board. The study included development of allocation factors, and preparation of exhibits for Black & Veatch expert witness testimony.

Commonwealth Edison (ComEd); Advanced Metering Infrastructure (AMI) Plan; Chicago, Illinois; 2012

Consultant. Mr. Macias provided consulting services support for the development of ComEd's cost and benefit analysis of its Smart Grid Advanced Metering Infrastructure Deployment Plan. The plan was supported by Black & Veatch testimony filed before the Illinois Commerce Commission.

Bamberg Board of Public Works (BPW); Cost of Service and Rate Design; South Carolina; 2012

Project Manager/Lead Analyst. Project Manager and Lead Analyst for the BPW's recent gas, electric, water and wastewater cost of service and rate study. This study included the development of unbundled electric rates. Also assisted with the implementation of cost of gas models to track purchased gas costs and the development of unbundled gas rates to pass along monthly changes in purchased gas costs.

JEA; Depreciation Rate Study; Jacksonville, Florida; 2011

Project Manager. Project Manager in the development of the depreciation rate study for JEA's electric, water, wastewater and chilled water utilities. The study included actuarial, lifespan and benchmarking analyses.

SourceGas Distribution, LLC; Cost of Service Study; Denver, Colorado; 2011

Project Manager. Project Manager for a cost of service study in connection with a natural gas rate case before the Nebraska Public Service Commission. The study included development of allocation factors, and preparation of exhibits for Black & Veatch expert witness testimony.

NW Natural; Revenue Requirement; Oregon; 2011

Consultant. Mr. Macias helped NW Natural develop and compile its revenue requirement in connection with a natural gas rate increase request. Mr. Macias created a revenue requirement model and detailed referencing to work papers and supporting analyses. The revenue requirement was sponsored by NW Natural witnesses before the Oregon Public Utility Commission.



Columbia Gas of Pennsylvania; Cost of Service Study; Pittsburgh, Pennsylvania; 2010-2011

Lead Analyst. Mr. Macias was the lead analyst of a class cost of service study in connection with a natural gas rate case before the Pennsylvania Public Utility Commission. Mr. Macias prepared the cost of service study using Black & Veatch's proprietary "Gas Cost of Service Model." This study included development of allocation factors, and preparation of exhibits for Black & Veatch expert witness testimony.

PECO Energy; Cost of Service Study; Philadelphia, Pennsylvania; 2009-2010

Lead Analyst. Mr. Macias was the lead analyst of a class cost of service study in connection with a natural gas rate case before the Pennsylvania Public Utility Commission. Mr. Macias prepared the cost of service study using Black & Veatch's proprietary "Gas Cost of Service Model". This study also included development of allocation factors, and preparation of exhibits for Black & Veatch expert witness testimony.

East-Central Iowa Rural Electric Cooperative; Electric Distribution System Valuation; Independence, Iowa; 2009-2010

Expert Witness. Mr. Macias provided expert witness testimony regarding the value of a portion of East-Central Iowa Rural Electric Cooperative's (ECI) electric distribution systems in a service territory proceeding before the Iowa Utilities Board. This valuation and testimony was prepared in response to a petition by the city of Independence to acquire ECI's service territory and property located within the affected area, which ECI did not want to sell. The property was valued using reproduction cost-less depreciation including consideration of going concern value and discounted cash flow (DCF) analysis.

Kansas City Power & Light Company; Jurisdictional Cost Allocations; Kansas City, Missouri; 2009-2010

Project Manager. Project Manager for a jurisdictional allocation analysis for Kansas City Power & Light Company (KCP&L). KCP&L operates under multiple jurisdictions, each using a different allocation method. More than 1 percent of KCP&L power supply and transmission costs were unallocated due to the inconsistent allocation methods. Black & Veatch sponsored testimony and exhibits before both the Missouri Public Service Commission and the Kansas Corporation Commission regarding the appropriate basis to allocate costs between jurisdictions. In addition to his role as project manager, Mr. Macias assisted with the jurisdictional allocation analysis and drafting of testimony and exhibits.

Black Hills Energy; Cost of Service, Rate Design and Weather Normalization Studies; Omaha, Nebraska; 2009

Project Manager/Lead Analyst. Mr. Macias served as project manager and lead analyst for class cost of service, rate design and weather normalization analyses in connection with filings for gas rate increases before the Nebraska Public Service Commission. Mr. Macias assisted in developing Black & Veatch-sponsored expert witness testimony.

Jasper Municipal Electric Utilities; Steam Generating Plant Valuation; Jasper, Indiana; 2009

Project Manager/Lead Analyst. Mr. Macias was project manager and lead analyst for the market valuation section of the Black & Veatch Plant Condition Assessment Study for Jasper (Indiana) Municipal Electric Utilities. The 14.5 megawatt coal fired steam generating plant was originally



constructed in 1968. For a number of years, the plant served to meet base and intermediate capacity requirements. Due to its age and cost of operation, more recently the plant operated very infrequently. Three market valuation cases were considered: “as-is”, with life extending improvements and scrap value. The plant was valued using reproduction cost-less depreciation and discounted cash flow. Mr. Macias utilized Black & Veatch’s Energy Market Perspective for forecasting energy prices for the DCF analysis.





ATRIUM ECONOMICS

Centered on Energy

Christopher C. Hutchinson

Consultant

Mr. Hutchinson is an energy industry professional with 10 years of electric utility and consulting experience providing analytical support and research expertise. Chris excels at crafting high impact short- and long-term optimization analyses for budgeting, risk management, and commodity trading resource planning. He is well versed in various time-of-use rate modeling for whole facilities and electric vehicles and has recent experience with gas LDCs tariff provisions including a focus on balancing services. His previous utility work involved power trading, managing meter data systems, load forecasting, producing regulatory filings and compliance reports, and developing annual capital budgets. Other preceding client work focused on supporting utility cost of service studies, revenue requirement analysis, and rate design. Prior to joining Atrium, Chris was employed as a Utility Specialist by the San Francisco Public Utilities Commission and as a Resource Planner for the City of Palo Alto Utilities.

EXPERIENCE AND SELECTED ACCOMPLISHMENTS

SAN FRANCISCO PUBLIC UTILITIES COMMISSION – CITY & COUNTY OF SAN FRANCISCO

Utility Specialist 2017 - 2019

Responsible for providing the load forecast of the Power Enterprise to ensure least-cost and max-revenue balancing power transactions from the California Independent System Operator (CAISO). Led daily meter data management, including meter communication troubleshooting, validation, estimation and editing, for all meter data used to complete customer billing.

- Provided the San Francisco Public Utilities Commission's (SFPUC's) weekly short-term municipal energy forecast for scheduling into the CAISO.
- Was project manager of the third-party vendor effort to improve existing load forecasting models.
- Led, oversaw and supported critical daily meter data management through metering software, for timely and accurate billing. Data management included individual meter data validation, estimation and editing as well as meter communication troubleshooting. Produced internal daily, weekly, and ad hoc metering software documentation.

EDUCATION

Master of Science, Applied Economics

University of Minnesota – College of Food, Agricultural, and Natural Resource Sciences; Saint Paul, MN |

B.S. Economics (major), Business Administration (minor) | University of Oregon; Eugene, OR | Graduated with Departmental Honors

YEARS EXPERIENCE

10

RELEVANT EXPERTISE

Financial and Data Analysis, Regulatory Support, Rates and Revenue Requirements, Energy Resource Planning, Power Trading, Risk Management, Market Studies, Forecasting, Project Coordination and Management



- Produced timely compliance reports for State (California Energy Commission (CEC), etc.) and Federal (Energy Information Administration (EIA), etc.) governmental agencies detailing electric generation, load, revenues and rate class statistics. Trained staff and produced documentation on these compliance reporting processes.
- Fulfilled meter and reporting data requests/inquiries to both external and internal stakeholders.
- Met Energy Trading Risk Management (ETRM) obligations through energy trade review and daily operations reporting.
- Contributed to the development of ETRM procedures and business process documentation.
- Processed account and meter service events within SFPUC's meter data management system.

CITY OF PALO ALTO UTILITIES – RESOURCE MANAGEMENT DIVISION | PALO ALTO, CA

Resource Planner / Energy Trader 2014 – 2017

Managed the City's electric supply portfolio including generation resources and procurement costs, while also analyzing commodity prices and load forecasts. Responsible for procuring power through bid solicitations to generators and power marketers. Took over Back Office settlement functions for gas, electric, and water utilities, as well as reconciling and reporting on all gas, electric, and water data for the City's utilities.

- Responsible for procuring energy, capacity and Renewable Energy Credits (RECs) to fulfill the City's load, Resource Adequacy and Carbon Neutral Plan (i.e. 100% carbon free electric supply) obligations.
- Was the project manager of The Climate Registry (TCR) greenhouse gas (GHG) emissions inventory and verification for the City. Managed the City's REC accounting within the Western Renewable Energy Generation Information System (WREGIS).
- Produced the annual electric supply budget and commodity uncertainties analysis.
- Evaluated Renewable Energy RFP applicants.
- Developed and implemented commodity price risk management strategies and programs.
- Developed bi-annual procurement plans for each energy product, detailed recommended purchase targets, risks, and justifications.
- Produced weekly, monthly, and quarterly electric supply portfolio status reports (summarizing projected cost, net revenue, load resource balance, value-at-risk, position, strategy, and portfolio risks) to over 30 colleagues including the Utilities Director and risk overseers.
- Was a voting City staff member for Northern California Power Agency (NCPA) committee meetings.
- Took on more responsibility as an interim member of Utilities' Back Office settlement team; quickly got up to speed on Energy Risk Management Policies, Guidelines and Procedures to begin reviewing and settling electric, gas, and water supply bills for the City.



- Maintained the electric, gas, and water settlement, reconciliation and reporting models; managed the monthly influx of utility data from NCPA, the SFPUC, and other counterparties.
- Produced monthly and quarterly performance reports for electric, gas and water utilities (summarizing settlements, generation, costs, and contract expenditures) to Utilities management to aid resource planning decisions.
- Produced regulatory reports for State (CEC, CARB) and Federal (EIA, EPA) agencies on electric generation and gas consumption to meet legislative requirements.
- Produced weekly drought reports on status of the City's water usage compared to the State's water reduction mandates. Aggregated and reported the City's monthly water usage data to the State Water Resources Control Board (SWRCB).

EES CONSULTING, INC – FINANCIAL SERVICES DIVISION | KIRKLAND, WA

Economic Analyst 2011 – 2014

Provided expert economic and financial modeling and analysis in support of utility cost-of-service analyses, electric rate design, energy program and utility policy planning, financial forecasts, benefit-cost analyses, renewable portfolio standard compliance, and regulatory research. Developed energy models, detailed reports, and PowerPoint presentations for conservation, energy efficiency, and demand side management program evaluations for senior managers of regulated electric utilities throughout the Pacific Northwest, Canada, and California.

- Skilled expertise and highly proficient Excel financial and energy modeling included cost-of-service analysis, electric rate design, market price scenarios, and Bonneville Power Administration's tiered rate methodology.
- Developed load forecasts, market price forecasts and statistical comparisons for utility resource planning.
- Compiled extensive regulatory research on related electric industry utilities, state and federal regulations, RPS compliance, energy policies, rates, etc.
- Conducted conservation program evaluations, which assist in utility program planning, data collection and presentation.



REDACTED

Northern Utilities, Inc.
Rate Case Consulting Services Agreement

THIS AGREEMENT for the provision of Consulting Services (“Agreement” or “Consulting Services Agreement”), made and entered into on May 11, 2021, by and between Northern Utilities, Inc. (“Northern” or “the Company”), a New Hampshire public utility corporation with its principal place of business at 6 Liberty Lane West, Hampton, NH 03842 and **Atrium Economics, LLC** (“Consultant”), having its principal place of business at 10 Hospital Center Commons, Suite 400, Hilton Head Island, SC 29926.

1. Services and Deliverables

Consultant will provide the following services to the Company and furnish the following deliverables (the “Services”): **Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization**, as described in Unitil’s Rate Case Studies RFP No. USC-42021, and any attachments thereto, as may be modified from time to time by mutual consent, evidenced in writing and signed by both parties.

2. Do Not Exceed Costs

As provided in the Consultant’s Response to the RFP dated May 3, 2021, for the **Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization**, the cost through the Company’s filing of its rate case shall not exceed [REDACTED].

3. Independent Contractor

Consultant is an independent contractor and not an employee or agent of Northern, Unitil Corporation or any subsidiary thereof. Consultant assumes full and sole responsibility for the payment of all compensation and expenses of its employees and for all of their state and federal income tax, unemployment insurance, Social Security, payroll and other applicable employee withholdings.

4. Subcontractors

The Company reserves the right to refuse to permit any person or organization (subcontractor) to participate in the work covered by this Contract, such refusal shall not be unreasonably imposed. No subcontract, if approved by the Company, shall relieve the Consultant of any liabilities or obligations under the Agreement, and the Consultant agrees that Consultant is fully responsible to the Company for the acts and omissions of Consultant's subcontractors and of persons employed by them. Consultant shall require every subcontractor to comply with the provisions of the Agreement, including the Mutual Confidential Non-Disclosure Agreement.

5. Supervision

Consultant shall perform the Services with reasonable care in a diligent and competent manner. Consultant shall maintain control over its employees and all of its subcontractors.

6. Liability and Indemnification

The Consultant agrees to indemnify, hold harmless and defend the Company, its parent, subsidiaries and affiliates and their respective employees, agents, officers, and directors, from and against any and all liability for loss, damages, fines, penalties, claims, actions, proceedings, expense, or cost, including but not limited to attorney's fees and litigation expenses which may be asserted against the Company or which the Company may incur or be held liable by reason of:

- bodily injury, including death, sustained by or alleged to have been sustained by any person or persons, including but not limited to employees of the Company, employees of the Consultant, employees of any subcontractor or any other third parties, and without regard to whether the person or persons are working within the scope of their employment;
- damage to property;
- personal injury, including but not limited to, false arrest, false imprisonment, or violation of privacy rights;
- any unlawful employment practice of the Consultant or any subcontractor, including without limitation, employment discrimination, wrongful discharge, termination of

employment or violation of state or federal statutes or regulations relating to employment practices; or

- resulting from the acts and/or omissions of Consultant or subcontractor, its employees, agents, subcontractors or those under its or their control, and/or arising out of or in any manner connected with the performance of this Agreement or the operations to be performed under this Agreement to the extent such injury or damage is caused by or is attributable in whole or in part to any act or omission of the Consultant, its affiliates or its or their employees or agents or those under its or their control; provided, however, that the Consultant shall not be held responsible for damage to private property when such damage results from the Consultant's having carried out in a proper workmanlike manner instructions received from a duly authorized representative of the Company as to the use to be made of, or act to be performed on, such private property.

7. Payment

Payment for services rendered shall be at the billing rate or rates as set forth at Page 21, Table 3 of the Consultant's Response to the RFP dated May 3, 2021. Consistent with the requirements of the New Hampshire Public Utilities Commission, the Company requires detailed hourly billing that will withstand the scrutiny of the Commission for rate case cost recovery. This means that bills should be detailed enough to justify cost recovery to the Commission while not divulging litigation work product, and shall at a minimum include the number of hours worked, the billing rate, and the specific nature of services performed. All other out-of-pocket expenses, including cost of travel or travel-related expenses, telephone, duplication, and delivery costs ("Other Direct Costs") should be tracked and identified separately on bills. The Company will remit payment on all appropriate invoices within thirty (30) days of receipt.

8. Confidentiality

Consultant acknowledges and agrees that due to the unique nature of this Agreement, Consultant shall be required to enter into a separate Mutual Confidential Non-Disclosure Agreement with Company in the form attached hereto as Attachment 1.

9. Non-Solicitation

During the term of this engagement, and for a period of one year following its expiration or termination, Consultant will not directly or indirectly solicit, employ or otherwise engage any Company employees (including former employees) or contractors who were involved in the engagement.

10. Complete Agreement

This Agreement constitutes the complete agreement between the Parties on the subject matter identified herein, and supersedes all prior oral and written communications between the Parties, and may be amended, modified or changed only in writing when signed by both parties. No term of this Agreement will be deemed waived, and no breach of this agreement excused, unless the waiver or consent is in writing signed by the party granting such waiver or consent.

11. Compliance with Laws

Consultant warrants that in performing work under this order Consultant will comply with all applicable laws, rules and regulations of governmental authorities and agrees to indemnify and save the Company harmless from and against any and all liabilities, claims, costs, losses, expenses, and judgments arising from or based on any actual or asserted violation by the Consultant of any such applicable laws, rules and regulations.

12. Assignment

Consultant agrees that neither this Agreement nor any interest herein shall be assigned or transferred by Consultant except with the prior written approval of the Company.

13. Governing Law

The rights of the parties hereto and the construction and effect of this contract shall be subject to and determined in accordance with the laws of the State of New Hampshire.

14. Severability

If any particular provision of this Contract be rendered or declared invalid by a court of competent jurisdiction of the State of New Hampshire, such invalidation of such part or portion of this Contract should not invalidate the remaining portions thereof, and they shall remain in full force and effect.

NORTHERN UTILITIES, INC.

By: Robert B. Hevert

Robert B. Hevert

NAME (PRINT OR TYPE)

TITLE: Sr. Vice President

Date: May 11, 2021

ATRIUM ECONOMICS, LLC

By: Ronald J. Amen

Ronald J. Amen

NAME (PRINT OR TYPE)

TITLE: Managing Partner

Date: May 11, 2021

ATTACHMENT 1:
MUTUAL CONFIDENTIAL NON-DISCLOSURE AGREEMENT

This MUTUAL CONFIDENTIAL NON-DISCLOSURE AGREEMENT is made as of May 11, 2021 between **Atrium Economics, LLC** (“Consultant”), having its principal place of business at 10 Hospital Center Commons, Suite 400, Hilton Head Island, SC 29926, and **Northern Utilities, Inc.** (“the Company”) having a principal place of business at 6 Liberty Lane West, Hampton, NH 03842, (together “the Parties,” individually “a Party”). The Parties hereby agree that disclosures of confidential information shall be governed by the following terms and conditions. A Party receiving information under this Agreement is referred to as “Recipient,” and a Party disclosing information is referred to as “Discloser.”

1. Definition of Confidential Information “Confidential Information” means any oral, written, graphic or machine-readable information including, but not limited to, any and all confidential and proprietary information, including all information or material that has or could have commercial value or other utility in the business or the prospective business of the Discloser, disclosed by the Discloser to the Recipient in connection with this Agreement, whether committed to memory or embodied in writing or other tangible form. Confidential Information includes, without limitation, contracts, fees, accounts, records, customer and client information, agreements and any other incident of the Discloser's business disclosed to the Recipient, which Confidential Information is clearly marked or identified as being “confidential” or “proprietary” (or a similar restrictive legend). Confidential Information does not include any information which Recipient can document: (a) is known to Recipient at the time of disclosure; (b) is independently developed by Recipient without use of the Confidential Information; (c) becomes known to Recipient from another source without confidentiality restriction on subsequent disclosure or use; (d) is or becomes part of the public domain through no wrongful act of Recipient; or (e) is information approved for disclosure or release by the Recipient by written authorization from the Discloser. Confidential Information does not include any source code or technical information subject to a license that meets the requirements of the Open source Definition. The Open Source Definition is found at <http://www.opensource.org/osd.html>.

2. Purpose for Disclosure The Parties may only use Confidential Information for the following purpose (the “Purpose”): Providing services as described in the Consulting Services Agreement between the Parties.

3. Non-Disclosure of Confidential Information Recipient agrees: (i) to use the same degree of care, but no less than a reasonable degree of care, to protect against the unauthorized disclosure of Discloser’s Confidential Information as it uses to protect its own Confidential Information; (ii) not to divulge any such Confidential Information or any information derived therefrom to any third person; (iii) not to make any use whatsoever at any time of such Confidential Information except as necessary in accordance with the Purpose; (iv) not to copy or reverse engineer any such Confidential Information; and (v) not to export or re-export (within the meaning of U.S. or other export control laws or regulations) any such Confidential Information or product thereof. Recipient agrees to disclose Confidential Information only to its directors, officers, employees, consultants, agents or independent contractors (its “Representatives”) with a direct need to know to effect the Purpose, and who are bound by legally enforceable obligations of confidentiality no less restrictive than the terms of this Agreement. Recipient shall not remove the proprietary notices from Confidential Information. Each Party agrees to promptly notify the other Party in writing of any misuse or misappropriation of Confidential Information of the other Party of which it becomes aware.

4. Mandatory Disclosure In the event that Recipient or its Representatives is requested or required by legal process or applicable regulations or laws to disclose any of the Confidential Information of Discloser, Recipient shall give prompt notice so that Discloser may seek a protective order or other appropriate relief. If such protective order is not obtained, Recipient shall disclose only that portion of the Confidential Information that its counsel advises that it is legally required to disclose.

5. Remedies Recipient acknowledges and agrees that due to the unique nature of Discloser’s Confidential Information, there may be no adequate remedy at law for any breach of Recipient’s obligations hereunder, which breach may result in irreparable harm to the Discloser and therefore, that upon any such breach of any threat thereof, the Discloser shall be entitled to seek appropriate equitable relief in addition to whatever remedies it might have at law.

6. Term The foregoing commitments of each Party shall survive any termination of the Purpose, and shall remain in effect with respect to any particular Confidential Information unless and until the Recipient can document that one of the exceptions stated in Section 1 applies, or unless mutually agreed, as evidenced by writing, to a shorter period.

7. No Additional Agreements; No Prohibition on Agreements Nothing herein shall obligate either Party to disclose any Confidential Information or negotiate or enter into any agreement or relationship with the other Party. Nothing herein shall prohibit a Party from entering into any arrangement or agreement with a third party.

8. No Warranty The Parties understand and agree that Confidential Information is provided “as is”; neither Party shall have any responsibility to the other based on any claim that any information furnished hereunder was incorrect, incomplete, or defective in any way. Neither Party makes any warranties, whether express, implied or statutory, regarding the sufficiency of the information disclosed for any purpose, including warranties of merchantability, fitness for a particular purpose, and non-infringement.

9. General (a) Assignment: This Agreement is not assignable or transferable by either Party; any attempted assignment will be void and without effect, unless such assignment is agreed to in writing by both Parties. (b) No Other Rights: No rights, title, license of any kind in any Confidential Information is provided hereunder, either expressly or by implication, estoppel or otherwise. (c) No Agency: This Agreement does not create any agency or partnership relationship. (d) No Waiver: No waiver of any provision of this Agreement, or a breach of this Agreement shall be effective unless it is in writing, signed by the Party waiving the provision or the breach. No waiver of a breach of this Agreement (whether express or implied) shall constitute a waiver of a subsequent breach of this Agreement. (e) Choice of Law: This Agreement will be governed by and interpreted in accordance with the laws of the State of New Hampshire, excluding its choice of laws rules. (f) Complete Agreement: This Agreement constitutes the complete agreement between the Parties on the subject matter identified herein.

Any modifications to this Agreement must be made in writing and signed by both Parties.

NORTHERN UTILITIES, INC.

ATRIUM ECONOMICS, LLC

By: Robert B. Hevert

By: Ronald J. Amen

Robert B. Hevert

Ronald J. Amen

NAME (PRINT OR TYPE)

NAME (PRINT OR TYPE)

TITLE: Sr. Vice President

TITLE: Managing Partner

Date: May 11, 2021

Date: May 11, 2021

REDACTED



MAY 3, 2021

PROPOSAL TO PROVIDE RATE CASE STUDIES

RFP No. USC 42021

A PROPOSAL FOR



FTI Consulting, Inc. ("FTI") is pleased to provide this proposal (the "Proposal") to the New Hampshire Division of Northern Utilities, Inc. ("Unitil" or the "Company") to prepare studies and expert testimony on all but one of the services described in Section 2 of Request for Proposal ("RFP") No. USC-42021:

- Allocated Cost of Service Study ("ACSS"),
- Marginal Cost Study ("MCS"),
- Rate design,
- Weather, sales and revenue normalization,
- Revenue decoupling ("Decoupling"), and
- Return on Equity ("ROE").

FTI is well positioned to support Unitil in the proceeding. The team we have assembled for the engagement has deep expertise in both consulting and in-house roles in each of these areas, which are detailed in the pages that follow, including our recent (and ongoing) work before the New Hampshire Public Utilities Commission (the "Commission") on each of these areas.

The remainder of our Proposal is organized as follows: Section 1 provides an overview of FTI and our Power & Utilities practice. Section 2 summarizes our understanding of the Company's requirements. In Section 3, we describe the qualifications of the experts who will lead our representation of Unitil. Section 4 defines our approach for each of the tasks for which we are proposing to provide services. Our proposed pricing for each task is shown in Section 5. Finally, Section 6 describes recent engagements that highlight our relevant capabilities. Resumes for selected members of our proposed project team are included in Appendix I.

I will serve as the Project Manager for this assignment as the term is defined in Section 2.7 of the RFP. In that role, I will hold primary responsibility for the successful completion of the project and serve as the Company's primary point of contact. Our engagement will be led out of FTI's Boston office, which is located at 200 State Street. As also required in the RFP, I hereby certify that our representation of Unitil will not create any conflict of interest.

If you have any questions or concerns about this submission or about FTI, please do not hesitate to contact me at your convenience at either (617) 320-0821 or matthew.decourcey@fticonsulting.com.

Thank you for the opportunity to develop this Proposal for your consideration. We look forward to working with the Unitil team on this assignment.

Sincerely,

A handwritten signature in dark ink, appearing to read "Matthew DeCoursey", written in a cursive style.

Matthew DeCoursey
Managing Director
FTI Consulting, Inc.

1. Overview of FTI Consulting

FTI is a global business advisory firm with more than 6,300 employees who work in 118 offices located in 29 countries worldwide. We are dedicated to helping organizations manage change, mitigate risk and resolve disputes: financial, legal, operational, political and regulatory, reputational and transactional. Each practice is a leader within its respective field and is staffed with experts recognized for the depth of their knowledge and a track record of driving lasting impacts. Collectively, we offer a comprehensive suite of services designed to assist clients across the business cycle – from proactive risk management to the ability to respond rapidly to unexpected events in dynamic environments. Our global footprint is shown below.



Our representation of Unitil will be led by a team of consultants (hereinafter the “Project Team”) selected from our Power & Utilities practice, which is based in Boston, MA and is comprised of industry specialists who focus exclusively on matters related to utility ratemaking, regulatory policy, strategy, and finance. Included among our experts are former utility executives, regulators, bankers, and financial analysts, whose combined experience includes decades spent working in and advising the utility industry. We regularly represent utilities before their regulators and have provided expert testimony in disputes, administrative proceedings, and before state and federal regulators in New Hampshire and across the U.S.

A selection of recent assignments that demonstrates our relevant capabilities is included in Section 6 of this Proposal. The personal qualifications of key Project Team members are described in the following section with additional detail available for each team member in the resumes attached as Appendix I.

2. Our Understanding of Unitil’s Requirements

The Company’s most recent rate case was filed with the Commission in 2017 and included a rate increase request and proposed Multi-Year Rate Plan (“MYRP”) that included three annual revenue step adjustment increases from 2018 through 2020. The purpose of the proposal was to allow it to recover the annual revenue requirement associated

with capital expenditures on eligible facilities. Following testimony by Commission Staff (“Staff”) and the Office of the Consumer Advocate (“OCA”), the Company and the parties involved reached a settlement that included, among other things,

- Establishment of an annual revenue increase of \$2.6 million.
- Authorization of a 9.5% return on equity.
- A 3.2% increase in the average residential heating customer’s permanent distribution rate.
- Authorization of a step increase effective May 1, 2018, to recover capital investments from 2017.
- An opportunity for the Company to file a second rate increase effective May 1, 2019, to recover certain capital investments made in 2018, which Unitil requested in February 2019.

Based on the record of the proceeding, we expect many of the issues in the Company’s next rate case to be similar to the ones disputed following the 2017 filing, particularly ROE and capital structure and the authorization of a MYRP or some other mechanism that will allow Unitil to continue to recover capital investments in a timely manner. In addition, we expect that Unitil will request that the Commission approve revenue decoupling, which it has allowed for other utilities.

3. Project Team and References

This section summarizes the qualifications of the team of Subject Matter Experts (“SMEs”) who we expect will lead our engagement.

Matthew DeCoursey, Managing Director, will serve as FTI’s Project Manager and have overall responsibility for successful management of this engagement. His experience includes more than fifteen years of advisory services to gas and electric utilities, investors, and other market participants. Prior to joining FTI, Mr. DeCoursey advised firms operating in the utility space in leadership roles at Concentric Energy Advisors and Levitan & Associates, Inc. Mr. DeCoursey holds a BA in Political Science from the University of Massachusetts at Boston and an MBA from the University of Massachusetts at Amherst.

Todd Bohan, PhD, Director, will coordinate the efforts of the Project Team on a day-to-day basis, oversee all administrative aspects of our assignment, and serve as FTI’s liaison to the Unitil managers who are working on the rate case. Over the course of his twenty-five years in the industry, Dr. Bohan has participated in numerous rate proceedings as an in-house expert, including his previous roles with Unitil and where he was responsible for the coordination of multiple natural gas and natural electric cases in New Hampshire and other jurisdictions. In addition to his prior employment with the Company, Dr. Bohan held senior positions focused on regulatory and commercial energy issues in New Hampshire at Eversource and Sprague Energy. Dr. Bohan holds a BA in Financial Economics from Saint Anselm College, an MA in Economics from Clark University and a PhD from Clark University.

John Cochrane, Senior Managing Director, leads FTI’s Power & Utilities practice and is a widely recognized expert on the subjects of cost of capital, mergers and acquisitions involving regulated firms, and utility strategy, areas upon which he has filed expert testimony in a number of jurisdictions, including New Hampshire. Prior to assuming the leadership of our practice, Mr. Cochrane held C-suite and other senior leadership positions at major U.S. utilities that include having served as the Chief Financial Officer and Treasurer of National Grid’s U.S. business. Mr. Cochrane also

serves as a member of the Board of Directors for several major energy companies.¹

Ken Sosnick, *Managing Director*, has more than fifteen years’ experience as a regulator and as an advisor working on issues related to cost-of-service ratemaking at gas and electric utilities, pipelines, and electric transmission companies. Before joining FTI, Mr. Sosnick spent 10 years employed at the Federal Energy Regulatory Commission (“FERC”), during which time he appeared as an expert in dozens of proceedings as a senior member of the FERC’s Office of Administrative Litigation. He also previously advised utility companies in consulting roles at Concentric Energy Advisors and at MRW & Associates, Inc.

Other consultants from the Power & Utilities team will provide research and analytical support to the SMEs listed above, including, among others, Michelle Hubbard, *Senior Director*; Chelsea Osinchuk, *Senior Director*; Drew Cayton, *Director*; and Ian McGinnis, *Consultant*; each of whose resumes are included in Appendix I. Additionally, the Project Team will have access to other SMEs from the Power & Utilities practice and from across FTI’s other practices in the event that the need for specialized expertise arises.

References

As required by Section 2.7 of the RFP, the table below lists three references with whom Mr. DeCoursey, the Project Manager for this assignment, has recently worked on closely related matters as well as three additional references who can attest to the quality of the work performed by other members of the Project Team.

Project Manager References	
<div> <div></div> <div>Liberty Utilities</div> <div></div> </div>	<p>Mr. DeCoursey appeared as an expert witness for rate design and MCS and developed a study demonstrating the benefits of revenue decoupling for EnergyNorth Natural Gas in DG 20-105. Also led FTI’s engagement to advise Granite State Electric in matters related to COS in DE 19-064 and currently advising St. Lawrence Gas on ROE matters.</p>
<div> <div></div> <div>Spiegel & McDiarmid, LLP</div> <div></div> </div>	<p>Mr. DeCoursey filed multiple rounds of expert testimony regarding MYRPs, rate design, and system modernization in FC 1156, Potomac Electric Power Company’s most recent distribution rate case before the Public Service Commission in the District of Columbia.</p>
<div> <div></div> <div>DTE Gas Supply</div> <div></div> </div>	<p>Since the beginning of 2021, Mr. DeCoursey has filed testimony on behalf of DTE Energy’s gas and electric utilities in Michigan in multiple proceedings before the Michigan Public Service Commission in support of each company’s supply contracts with the NEXUS pipeline.</p>

¹ Mr. DeCoursey’s certification in the transmittal letter accompanying this Proposal that our representation of Unifil would not create conflicts includes Mr. Cochrane’s Board memberships. Put another way, no conflicts arise from our representation of Unifil in its next proceeding before the Commission from any of those memberships.

Project Team References

[REDACTED]
[REDACTED]

Unitil

[REDACTED]
[REDACTED]

Dr. Bohan worked for [REDACTED] for a period of five years (2010–2015), during which time he provided expert testimony before the New Hampshire Commission regarding energy procurement, external delivery and stranded cost matters.

[REDACTED]
[REDACTED]

Vermont Electric Power Company

[REDACTED]
[REDACTED]

Since 2018, the Power & Utilities practice has advised VELCO on an ongoing basis regarding matters related to regulatory strategy, capital structure, evaluation of commercial opportunities, market analysis, and transactions.

[REDACTED]
[REDACTED]

Spire, Inc.

[REDACTED]
[REDACTED]

Multiple team members from the Power & Utilities practice are representing Spire in proceeding related to proposed tariff changes on the Transco pipeline (RP20-614, RP20-618). The team has previously advised spire on various other commercial and regulatory issues.

Additional detail regarding these and other engagements recently completed by members of the Project Team is provided in Section 6 and in the resumes included in Appendix I. More information regarding these or other assignments is available upon request.

4. Scope of Work and Project Timelines

In this section we describe our planned approach to the requirements identified in Section 2 of the RFP for which we propose to provide services. As noted above, we propose to undertake the work described in Section 2 as Areas 1 through 3. For organization simplicity, we have bifurcated Area 1 into three separate tasks; as a result, our proposed scope includes five tasks designed to cover the three Areas identified in the RFP.

Task 1: Allocated Cost of Service Study (Area 1)

To develop the ACSS, members of the Project Team will work with Unitil’s SMEs to collect a full set of cost accounts which will be used to first calculate a revenue requirement based on employee costs (salaries, benefits, etc.), direct operating expenses, depreciation and amortization, allocation of corporate expenses and shared service costs, and related inputs. The first step in that process will be the provision of a data request to the Company requesting the required data, which we will issue within a week of our authorization to begin work.

Using these data we will develop financial *pro formas* that compare test period revenues, inclusive of adjustments for known and measurable effects, to the revenue requirement in order to estimate the test year revenue deficiency. We will also determine, in consultation with Unitil experts, whether a step adjustment is reasonable to account for post-test-year investment activity.

These data will be used to conduct the ACSS in order to determine the cost responsibility of Unitil’s business functions. To do so, we will identify which function the costs are incurred for, classify them as demand-related, customer-related,

or commodity-related costs, and then either assign the costs directly to a function or allocate them across different functions using calculated allocation factors. Additionally, our analysis will include a functional breakout between production and distribution for the components of indirect gas costs – Local Production Capacity (LP-air) and LNG Storage costs, along with miscellaneous administrative and general costs associated with providing Gas Supply Service² – and will be separately identified as the revenue requirement for inclusion in distribution rates.

In the event the Company already has models developed for this purpose, the Project Team can update those with new data. Alternatively, if no such tools already exist, we can develop new models based on templates we have on hand. In either case, we will provide the Company with fully functional copies of models, which can also be provided in testimony.

FTI will sponsor testimony related to the ACSS, which will be provided in draft form and subsequently finalized following the receipt of feedback and input from Unitil. Post-filing, we will lead support for the Company in all aspects of the proceeding related to the ACSS including settlement discussions and technical conferences, responses to discovery requests from other parties, the provision of assistance to the Company in drafting discovery requests for opposing parties' testimony, participation in a hearing to be held at the Commission, and assistance with post-settlement discussions.

Task 2: Marginal Cost Study (Area 1)

The MCS will provide an estimate of the cost of providing an additional unit of service to customers. Specifically, consistent with the Commission-approved methodology established in DG 13-086, and used in the Company's most recent rate case, we will calculate the marginal distribution costs that Unitil would be incurred to serve new customers, based on those customers' contributions to cost and to the Company's peak and average demand.

To do so, we will develop an analyses of capacity-related distribution costs, including plant additions, operations and maintenance ("O&M"), and administrative and general expenses that are correlated with (e.g. caused by changes in) peak demand, and of customer-related costs, including changes in O&M, plant, and other expenses that are correlated with the number of customers the Company serves. Analyzing the relationships between costs and drivers on a class by class basis will allow us to determine the marginal cost to serve new customers, an important component to the design of the Company's distribution rates.

In past proceedings we have conducted regression analyses using statistical software, an approach we plan to use again.³ Generally, the equations are defined by a cost variable (such as distribution plant additions) as the dependent variable and one or more cost drivers (such as peak demand or number of customers) as the independent variable. When a robust model is identified, the resulting coefficient is a measurement of the estimated marginal cost of the cost variable associated with a unit change in the cost driver variable. We will employ a number of different model specifications and select the appropriate estimation models based on reasonableness of results and explanatory power of the regression equation and resulting coefficients.

The first step we will take in developing the MCS will be the issuance of data requests to the Company, which will be provided within one week of our beginning work on the assignment. FTI will request information such as historical distribution and general plant balances, historical expenses for categories such as distribution, customer, accounting,

² As detailed in Section IV of the Company's currently approved tariff.

³ See, for example, Mr. DeCoursey's testimony in DG 20-105.

marketing, and administrative and general, unit cost estimates, and engineering studies.

These data will then be used to develop the MCS model, that will include our calculations and regression output. Based on the Company's preference and familiarity with the statistical modeling tools we plan to utilize, we can provide a working copy of the model for review or an electronic walkthrough, to review the calculations and preliminary findings. Results will support the development of testimony, which will be provided in draft form prior to finalization pursuant to the schedule described below.

FTI will also participate in all aspects of the case related to the MCS including settlement discussions and technical conferences, responses to discovery requests from other parties, the provision of assistance to the Company in drafting discovery requests for opposing parties' testimony, participation in a hearing to be held at the Commission, and assistance with post-settlement discussions.

Task 3: Rate Design & Weather, Sales and Revenue Normalization (Area 1)

At a high level, the establishment of just and reasonable gas rates consists of three separable but closely related activities: the establishment of the utility's revenue requirement, the application of that requirement to each class of customers, and the design of rates to recover the revenue requirement given the specifics of demand within each class. The Project Team will develop and test the rates that will ensure recovery of the appropriate costs.

An appropriate rate design encourages the efficient use of energy and of the Company's infrastructure and discourages waste. For that reason, the allocated revenue requirement is based, in part, on the MCS analysis. A standard approach is to apportion the MCS results to customer classes based on demand using the Equi-Proportional Method that is in widespread acceptance based on what we expect will be the current rate structure, resulting in preliminary rate estimates. Other adjustments, including those to ensure rate continuity, among others, may also be applied. Those rates will then be tested using test-year billing determinants, adjusted as necessary for weather normalization, to demonstrate that they provide sufficient recovery of the total revenue requirement.

Our functional approach to Task 3 is comprised of three core elements. *First*, we will arrange a meeting with Company experts to discuss objectives and sensitivities as they relate to the rate design with particular emphasis on the Company's financial objectives. Based on information currently available, we anticipate that the customer charges for the Residential class, R-5 (Residential Heat), R-6 (Residential Non-Heat), and R-10 (Residential Low Income Heat), will continue to be lower than ACSS and MCS studies would support and that this is an item to be addressed. It may be appropriate to schedule follow-up discussion with Company.

Second, we will provide the Company a working MS Excel rate model that includes links to the ACSS model as well as calculation of preliminary rates and adjustments. The model will be structured to maximize transparency with regard to reconciliation between the rate design model and the ACSS model (including, but not limited to the revenue requirement), revenue proofs, and requirement adjustments.

Third, we will prepare expert testimony and participate in all aspects of the case related to rate design including settlement discussions and technical conferences, responses to discovery requests from other parties, the provision of assistance to the Company in drafting discovery requests for opposing parties' testimony, participation in a hearing to be held at the Commission, and assistance with post-settlement discussions.

Task 4: Revenue Decoupling (Area 2)

Our development of a revenue decoupling framework will be addressed in several discrete steps. First, the Project

Team will engage in research to define the “state of the art” with regard to revenue decoupling in New Hampshire and elsewhere. The first and most obvious source of such research will be a review of the Commission’s orders of relevance and, in particular, the ongoing EnergyNorth rate case. In its last completed rate case, EnergyNorth was the first New Hampshire utility to be allowed a decoupling mechanism. In its current ongoing proceeding, the Commission is reviewing the results, evaluating adjustments, and contemplating reauthorization of EnergyNorth’s revenue decoupling mechanism. Certain refinements that will be required, including corrections to the manner in which changes in customer counts are addressed in the decoupling mechanism, provide useful “lessons learned” that can and should be applied in the development of Unitil’s decoupling framework.

We will also review available precedent in other jurisdictions. There are numerous examples of gas and electric utilities that utilize a variety of decoupling mechanisms in the New England states and New York, each of what are (to varying degrees) markets in which Energy Efficiency, and each experience generally similar weather patterns. We will review data reported by the utilities, the records of proceedings before their state regulators, publicly available reports and analyses from reputable sources, investor data, industry trade press materials and other sources of information as directed to analyze what has worked, what has not, and where the utilities have found opportunities to add values in ways that have been acceptable to the regulators.

Our research will also provide the basis for a survey of utilities that utilize revenue decoupling vs. those that do not, that we will use to analyze the interplay between decoupling mechanisms and authorized ROEs in Task 5, as we explain below.

Notably, the Power & Utilities team maintains a database containing much of the required data on an ongoing basis, in large part because we frequently advised utilities in the northeast on matters related to decoupling. The readily availability of that data allows us to offer pricing for this element of the scope at what we believe will be a competitive price and, more importantly, means that we can develop more granular, detailed analyses because our experts are already well up the “learning curve” with regard to the regulatory state of play and the detailed issues of relevance.

Additionally, we also plan to coordinate closely with Unitil management to define objectives and sensitivities with regard to decoupling. In addition to the obvious concerns that arise from uncertainties related to decarbonization, potential changes to rate design, recent losses that have arisen from weather, and impacts of the ongoing health crisis, we would also strongly prefer to avail ourselves of the Company’s long-run outlook on matters that include customer growth, changes in consumption, and other commercial factors.

Such changes are far from trivial. For example, one reason that EnergyNorth’s decoupling mechanism will likely change when the Commission issues its final order in Docket No. DG 20-105 is the losses that it experienced from changes to customer consumption. Specifically, shortly after EnergyNorth received approval for its revenue decoupling mechanism, its commercial group embarked on a very successful campaign to expand sales to large C&I customers. It was able to successfully attract new customers, some of whose consumption was considerably larger than had been previously typical. As a result, per-customer consumption in certain classes changed considerably, moving EnergyNorth’s earned revenues per customer out of alignment with authorized per-customer revenue targets that had been embedded in its tariff as part of revenue decoupling mechanism. In certain classes in which there were relatively few customers, the impacts of the new additions was more pronounced, exacerbating the effect. Ultimately, EnergyNorth was required to make payments under its decoupling mechanism for reasons that were not strictly envisioned when it was implemented – and that, potentially, could have been avoided had the mechanism been planned in light of the foreknowledge that a concerted effort would be made to expand the C&I customer base.

Based on these discussions and on our research, the Project Team will provide for Unitil's review a brief *Decoupling Memorandum*, which summarizes our findings and provides our recommendation for the structure of a mechanism; if preferable, we can alternatively provide those findings and recommendations in the form of a presentation delivered to Unitil's management. Regardless of the delivery format, once Unitil has had a chance to review our recommendations, we will develop the expert testimony to be included in the Company's filing.

We note that such testimony will be limited to the mechanics of our recommended decoupling mechanism and will not include discussion of the benefits and advantages that decoupling can confer to ratepayers. Our reasons for this decision are two-fold. First, the Commission's orders on decoupling state explicitly that its rationale for approving the EnergyNorth mechanism is to support the development of utility-sponsored EE in the state. Included in the record of Docket No. DG 20-105 is an expert report prepared by FTI which provides what we believe is a comprehensive demonstration of those benefits such that a separate analysis commissioned by the Company would be redundant. Second, because the Commission has required that the New Hampshire utilities include decoupling in their next rate cases, the discussion has accordingly shifted from whether to develop such mechanism to how they should be implemented.

As with the other tasks described in this Scope, we will participate in all aspects of the case related to revenue decoupling including settlement discussions and technical conferences, responses to discovery requests from other parties, the provision of assistance to the Company in drafting discovery requests for opposing parties' testimony, participation in a hearing to be held at the Commission, and assistance with post-settlement discussions.

Task 5: Cost of Capital (Area 3)

Our approach to analyzing Unitil's cost of capital is generally consistent with the one we have utilized in previous proceedings before the Commission and in other jurisdictions; as such, we expect that the general framework is familiar to Unitil. Specifically, we envision Task 5 as being comprised of seven related subtasks:

First, we will estimate the Company's capital structure and cost of debt based on balance sheet actuals if there is no such estimate from a Unitil SME (who will be testifying to that effect) currently available. *Second*, we will utilize our in-house ROE model, updated as appropriate for changes in financial conditions to estimate the Company's cost of equity that will allow it to attract the capital required to operate a safe and reliable gas distribution system. Our model includes calculations based on constant growth Discounted Cash Flow ("DCF"), multi-stage DCF, and capital asset pricing models, all of which have been considered by the Commission in recent proceedings.

Third, we will conduct an analysis of the impact of the Company's proposed decoupling program on corporate risk and cost of capital.⁴ To do so, we will develop separate, trial proxy groups for testing and analysis purposes using data we collected in Task 4, one for utilities that have authorized revenue decoupling mechanisms in place and another for those that do not. Additionally, we will either differentiate between different types of decoupling mechanisms – the most important distinction among which will be full decoupling vs. limited decoupling, which provides recovery only for revenues lost to specific elements – or make appropriate adjustment. Using these data, we will run comparative analyses that we expect will parameterize the impact on ROE from revenue decoupling. Using these results, we can evaluate the reasonableness of the reduction of 10 basis points that the Commission applied to EnergyNorth's

⁴ To the extent that revenue decoupling reduces utilities' risks, it should reduce the returns that investors require to hold their stocks. Thus, if sizeable ROEs from utilities that have revenue decoupling authorized and those that do not are collected, it should be possible to determine with reasonable accuracy the magnitude of the reduction.

authorized return when decoupling was first approved in its April 2018 Order in Docket No. DG 17-048 and which we expect it will apply again unless it is presented with a compelling rationale to not do so. If our analysis supports the position that the Commission's adjustment is too high, we will incorporate arguments to that effect in the testimony whose preparation is described below.

Fourth, we will specify upward adjustments to ROE such as a premium for small company size, floatation costs for capital issuances, and other factors. *Fifth*, we will share our results with the Company, including a summary copy of our ROE model, before we finalize the results. This can be accomplished via written memorandum or an electronic meeting. *Sixth*, based on these results, we will develop expert testimony sponsored by Mr. Cochrane, a complete draft of which will be provided by a mutually agreed upon schedule.

Finally, *seventh*, we will participate in all aspects of the case related to cost of capital including settlement discussions and technical conferences, responses to discovery requests from other parties, the provision of assistance to the Company in drafting discovery requests for opposing parties' testimony, participation in a hearing to be held at the Commission, and assistance with post-settlement discussions. Our modeling platform can also be deployed to support settlement discussions and the Company's participation in technical conferences and other elements of the rate case.

Project Management and Timelines

Our first task upon retention will be to arrange a Kickoff Meeting, to be conducted electronically, to discuss project logistics and any adjustments required to the approaches and methods described in this Proposal. Thereafter, we will develop data requests in each of the relevant areas described above, which will provide the information and framework for us to begin work. We have also found that the establishment of regular update calls to coordinate preparation of the materials that will ultimately be developed for filing is a prudent approach for rate cases. As a straw proposal, we suggest bi-weekly discussions at the outset of our engagement, recognizing that this can be adjusted or accelerated as filing deadlines draw near or conditions otherwise warrant.

Below, we provide a preliminary timeline of the key milestones associated with each of the three tasks described above. Also included is an tentative schedule based on total time elapsed that assumes our authorization to begin work on or about May 10, 2021. As shown below, we expect that starting at that time would allow us to comfortably work through a schedule that culminates in expert testimony for each area of relevance available for filing by the end of July 2021.

The schedule requires two important qualifications. First, it is intended to be indicative only. Project milestones and deliverable deadlines will be established in consultation with the Company following our retention. Second, this is a high-level schedule insofar as it includes only key target dates. Secondary milestones intentionally omitted include ongoing project communications, additional data exchange, the delivery of certain draft documents and models, *ad hoc* deliverables, and other significant project elements. Thus, this schedule should not be construed to limit in any way the scope of interactions with the Unitil team.

Target date	Total time elapsed (weeks)	Task 1 ACSS	Task 2 MCS	Task 3 RD & Normal	Task 4 Decoupling	Task 5 ROE
		Authorization to begin work				
		Kickoff Meeting and delivery of first Data Requests				
				Meet to discuss objectives and strategy	Meet to discuss objectives and strategy	
					Decoupling Memorandum	
		Prelim. ACSS model(s)	Prelim. MCS model			
						Prelim. ROE results and summary model
				Rate Design model		
				Draft testimony		
				FTI to receive input and feedback on draft testimony		
				Final testimony and exhibits		

5. Cost and Pricing

From Section 3.13 of the RFP, we conclude that Unitil is seeking an Not to Exceed (“NtE”) bid for each element to be bid upon that includes all work that will be undertaken through the filing of direct testimony in the rate case expected to be filed by July 30, 2021. Our NtE quote for each of the three area tasks included in this Proposal is provided in Appendix II. If the Company selects FTI for all three area tasks, it may be possible to provide a discount on the total NtE.

Our proposed hourly rates for post-filing support are shown below. FTI’s hourly rates are based on titles. As such, the hourly rate for each member of the Project Team is based on their title at the start of the engagement. These rates would remain effective until the Commission issued its final order in the proceeding.









Title	Hourly Rate
Senior Managing Director	
Managing Director	
Senior Director	
Director	
Consultant	




To the extent that we were to incur out-of-pocket expenses during the course of this engagement, they would be passed along at cost. We do not believe it is likely that we will incur significant costs in the course of executing this scope.

6. Related Projects

In this section, we describe some examples of FTI's that demonstrate our capabilities in areas of relevance, including spanning cost of service and rate design, rate case strategy and revenue decoupling, and cost of capital.

Relevant Experience	
	FTI is currently representing Liberty Utilities in its ongoing general rate case for EnergyNorth Natural Gas before the Commission. Providing analysis and expert testimony on behalf of Liberty Utilities regarding functional cost of service, marginal cost of service, rate design, and cost of capital.
	Advised financial officers of the City of Jacksonville, FL on matters related to cost of service, rate design, and customer bill impacts associated with the proposed privatization of the Jacksonville Electric Authority.
	FTI is currently advising Vermont Electric Power Company on a range of strategic and regulatory matters that includes redevelopment of the cost-of-service model to be used in its capital structure and short-term financing decisions, strategic advisory regarding new business opportunities, and analysis of potential transactions.
	FTI represented the District of Columbia Office of the People's Counsel in the review of Potomac Electric Power Company's MYRP proposal, including expert testimony regarding the transition from traditional rate-making methods related to MYRPs, performance-based ratemaking, revenue decoupling, and performance improvement mechanisms.
	Provided advisory services for the municipal utility serving Anchorage, AK in its rate case before the Regulatory Commission of Alaska regarding matters related to the prudence of its investment in new generation.
	Provided expert testimony on behalf of the New Jersey Board of Public Utilities in Public Service Electric and Gas' rate case. Analyzed operational and financial aspects of resilience and hardening programs and participated in settlement negotiations.

	<p>Advised PPL Electric Utilities on regulatory rate case strategy as it considered various transmission investments within PJM. Developed a regulatory financial model to assess various investment opportunities.</p>
	<p>Represented Liberty Utilities in its general rate case for Granite State Electric before the Commission. Provided analysis and expert testimony on behalf of Liberty Utilities regarding ROE, capital structure, risk profile and related matters.</p>
	<p>Provided cost of capital support to Steelriver Infrastructure Partners for the Trans Bay Cable, an underwater direct current transmission cable connecting San Francisco to Pittsburg (CA), on the reasonableness and methodology of its ROE calculation.</p>
	<p>Prepared a formal report for Ofgem, the Great Britain electricity and gas regulator, to establish a redesigned cost-of-capital framework across all gas and electricity networks.</p>
	<p>Testified on behalf of National Grid in rate cases regarding ROE, capital structure and debt and equity matters in all National Grid state jurisdictions, including New Hampshire, Massachusetts, Rhode Island, New York and before the Federal Energy Regulatory Commission.</p>
	<p>Advised Atmos Energy in its rate case before the Texas Railroad Commission for Atmos Pipeline Texas. Conducted analyses of the structural and market risks to which the Company was exposed and made recommendations regarding ROE estimation.</p>
	<p>Advised Equinor Wind regarding changes related to the NY Independent System Operator market rules related to Buyer-Side Mitigation and the entry of state-sponsored resources.</p>
	<p>Currently advising the California Public Utilities Commission regarding strategic options to retire the Aliso Canyon gas facility while maintaining electric reliability. Conducting market studies to identify various investments that would replace unserved, gas-fired generation in the event of the facility's retirement and developing long-run price forecasts in order to analyze the marginal economics of various options.</p>

	<p>Currently representing Spire in proceedings related to proposed tariff changes on the Transco pipeline (RP20-614, RP20-618). The team has previously advised Spire on various other commercial and regulatory issues.</p>
	<p>Provided expert testimony for a carve-out issue for Piedmont Natural Gas before the North Carolina Utilities Commission. Incremental facility was not connected to the main distribution system and provided testimony demonstrating that there was not possible subsidization from other ratepayers.</p>
	<p>Currently representing DTE Energy in proceedings before the Michigan Public Service Commission. Provided an expert report and testimony that included long-run simulations of relevant gas markets and estimated how the NEXUS Gas Transmission pipeline is expected to affect the delivered cost of gas that will be paid by consumers in Michigan.</p>

Appendix I: Project Staff Resumes



Matthew DeCoursey

Managing Director

matthew.decoursey@fticonsulting.com

200 State Street
9th Floor
Boston, MA 02109

Mr. DeCoursey is an experienced management consultant advising clients in power and gas industries in jurisdictions throughout North America. Core competencies include regulatory analysis and strategy, transactions, financial analysis, and corporate strategy.

Education

MBA in Finance,
University of
Massachusetts at
Amherst

B.A. in Political
Science, University of
Massachusetts at
Boston

PROFESSIONAL EXPERIENCE

- *FTI Consulting*, Managing Director, Boston MA, March 2018 – Present
- *Concentric Energy Advisors*, Project Manager and Principal, Marlborough MA, January 2016 – February 2018
- *Leviton & Associates*, Senior Consultant, Boston MA, October 2004 – December 2015

SELECTED ENGAGEMENTS

- **St. Lawrence Gas.**
Providing expert testimony on cost of capital in its most recent rate case before the New York Public Service Commission.
- **EnergyNorth Natural Gas.**
Provided expert testimony on rate design and marginal cost of service in its most recent rate case before the New Hampshire Public Utilities Commission.
- **Atmos Pipeline Texas (“APT”).**
Advised APT on its general rate case before the Texas Railroad Commission. Prepared testimony, conducted analyses of captive customers, and evaluated APT’s competitiveness in support of a recommendation on the high end of the zone of reasonableness on ROE.
- **Jacksonville Electric Authority (“JEA”).**
Served as an advisor to JEA and its bankers regarding the company’s privatization. Evaluated options for transaction structuring from a regulatory perspective, supported development of rate and financial models, developed strategies for NewCo commission approval.
- **Municipal Light & Power.**
Advisory services for the municipal utility serving Anchorage, AK, in its recent rate case before the state regulator regarding matters related to the

prudence of its investment in new generation. Managed a consulting team that conducted research of prudence issues and standards in Alaska and other jurisdictions, drafted testimony, managed discovery, and developed analyses related to current and expected operational benefits used to rationalize the investment.

- **District of Columbia Office of People's Counsel.**

Provided expert testimony analyzing the Multi-Year Rate Plan filed by the Potomac Electric Power Company. Analyzed risks and costs to customers and proposed alternative structures. Currently participating in settlement negotiations.

- **Spire Energy.**

Estimated the net benefits to market participants of Spire Energy's STL pipeline, currently in development. Used GPCM in conjunction with an electric simulation model to estimate price reductions attributable to STL's commercialization. Results were developed into an expert report filed with STL's CPCN application before the Federal Energy Regulatory Commission ("FERC").

- **Spire Missouri.**

Advised Spire during its participation in the most recent rate case for Mississippi River Transmission. Analyzed billing determinants, evaluated settlement proposals, participated in negotiations, and developed testimony filed at the FERC.

- **Eastern Interconnect Planning Collaborative ("EIPC").**

EIPC is a consortium of the six Independent System Operators ("ISO") that comprise the North American Eastern Interconnect. As part of a major study on gas-electric interdependence issues funded by the U.S. Department of Energy and administered by EIPC, conducted simulation modeling in each area of the Eastern Interconnect using the GPCM Daily model in conjunction with a production cost model for the electric market to analyze gas deliverability under peak demand conditions and quantify generation at risk arising from gas pipeline constraints.

- **New Jersey Resources.**

Conducted a market study to demonstrate the benefits of the proposed Adelphia Gateway expansion project. Managed a team that generated price forecasts using GPCM to quantify the impact on delivered gas prices attributable to the project, estimated related electric market impacts using an econometric energy price forecasting model, and oversaw an analysis to estimate socioeconomic benefits using IMPLAN. Expert report included in the project's application to the FERC.

- **Maryland of Office of People’s Council (“OPC”).**

Advised OPC regarding a request for a change in rates filed at the FERC by the Exelon companies serving Maryland. Analyzed the companies’ proposal regarding rate changes attributable to the Tax Cuts and Jobs Act (“TCJA”) and its effect on Accumulated Deferred Income Taxes (“ADIT”) and related matters.

- **ISO New England (“ISO-NE”).**

Managed a team of internal and external consultants providing market and policy analysis related to ISO-NE’s capacity market and its triennial reset of The Net Cost of New Entry and the Offer Review Trigger Price. Oversaw market analysis and price forecasting to generate a 20-year outlook of market conditions, managed engineering subcontractors’ commercial evaluation of conventional and renewable generation options, and communicated the consulting team’s findings to stakeholders.

- **Institutional Investor.**

Provided market analysis and advisory services to an investment bank seeking to purchase a High Voltage, Direct Current (“HVDC”) interconnector between RTOs. Analyzed capacity and energy price spreads and conducted financial modeling to estimate project cash flows.

- **EnergyFairness.**

On behalf of an advocacy group representing the interests of regulated utilities, provided advisory and advocacy related to a proposed Florida ballot initiative to deregulate the electric market in that state. Conducted analyses, supported outreach, and delivered presentations regarding the risks and costs of the proposed measure to the Florida legislature.

- **Industrial Power Consumers Association of Alberta.**

Advised a group of industrial consumers of electricity on matters related to the implementation of a capacity market in Alberta. Analyzed proposed market rules, identified potential weaknesses, and assisted in the development of an expert report filed with the provincial regulator.

- **Multinational Energy Company.**

Advised an Asian conglomerate regarding the purchase of gas utilities in the U.S. Developed a study to compare regulatory environments on a state-by-state basis and estimated the regulatory advantage in each jurisdiction. Participated in negotiations with acquisition targets. Liaison with client’s finance team to conduct due diligence on acquisition and to parameterize risks and opportunities related to the regulatory environment.

- **LNG Project Developer.**

Provided market analysis and commercial support for the developer of an LNG-to-power project in Central America. Working in partnership with an engineering partner, provided advisory services for the full development cycle including price forecasting and risk management advisory, development of project financials, selection of appropriate gas turbine and Floating Storage and Regasification Unit technologies, marketing of project output, and contract negotiations.

- **Maryland Public Service Commission.**

Managed the development of a study for Maryland's state regulator to evaluate long-term options for the state's energy future. Developed long-run economic outlooks of various conventional and renewable generation options as well as demand-side measures to quantify the impact of achieving renewable policy mandates on ratepayers.

PUBLICATIONS

- 2008. "Managing Regret Risk." International District Energy Association Annual Conference
- 2010. "How to Shop for Power." MassBusiness Magazine (with E.G. Cool)
- 2017. "Overview of Gas-Fired Generation Development." Power-Gen University Course at Power-Gen International (with K. Paul)
- 2019. "Building the Generation Fleet of the Future." Power-Gen University Course at Power-Gen International (with K. Paul)

MEMBERSHIPS

- Member, Energy Bar Association
- Member, Global Association of Risk Professionals



Todd Bohan

Director

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9th Floor
Boston, MA 02109

Education

Ph.D. Economics,
Clark University

M.A. Economics,
Clark University

B.A. Financial
Economics, Saint
Anselm College,
magna cum laude

Todd Bohan is a Director in FTI's Power & Utilities practice within the Economic and Financial Consulting segment, specializing in electric and natural gas utility ratemaking, and regulatory advisory and energy procurement services.

Dr. Bohan joined FTI Consulting in March of 2020 and brings 25 years of utility sector experience, in addition to over 30 years of experience teaching economics and finance at the university level to his work.

Dr. Bohan's utility-sector experience includes a broad spectrum of energy and policy matters including utility rate cases, transmission and delivery service cost recovery, electric default service, cost-of-gas adjustment clauses, service quality and performance-based ratemaking, cost of capital, renewable energy, energy efficiency programs and competitive electricity and natural gas supply. He has conducted energy supply solicitations for electric default service procurements and long-term renewable contracting and has provided analytical support in regulatory proceedings.

Having testified before regulatory commissions in a variety of regulatory proceedings, Dr. Bohan brings a unique perspective having worked for regulated utilities, a state regulatory agency and a competitive energy supplier.

PROFESSIONAL EXPERIENCE

FTI Consulting, Director, Boston, MA, 2020 to Present

- Serving as Project Manager and providing subject matter expertise on cost of capital for Liberty Utilities/St. Lawrence Gas' rate case before the New York Public Service Commission.
- Serving as Project Manager for Liberty Utilities/EnergyNorth Natural Gas rate case before the New Hampshire Public Utilities Commission. Providing subject matter expertise on marginal cost of service, rate design and cost of capital.
- Supported expert testimony for the District of Columbia Office of the People's Counsel in its review of PEPCO's Multi-Year-Rate Plan proposal.
- Provided support for the National Grid Massachusetts Management Audit in the areas of staffing, DER interconnect process, IT program management and the EV charging program.
- Conducted regulatory research across multiple jurisdictions for a number of key client matters including wholesale market evaluation, capacity market mitigation and acquisitions.

Eversource Energy, Team Lead of Rates, Manchester, NH, 2019 to 2020

- Responsible for regulatory requirements, rates and electric tariff administration in Eversource Energy's New Hampshire service area.
- Provided analytical support for rate filings and proceedings, cost-of-service, contracting and pricing analyses.
- Represented Eversource Energy in rate and regulatory matters before the New Hampshire Public Utilities Commission.

Sprague Resources GP, Manager, Regulatory Compliance, Portsmouth, NH, 2015 to 2019

- Directed all regulatory initiatives for Sprague's natural gas supplier and electricity brokerage business across 18 jurisdictions.
- Managed all regulatory compliance activities for federal, state and local jurisdictions and ensured compliance with applicable utility rules and requirements for retail energy marketing.
- Oversaw the administration of government compliance and reporting requirements including small business and disadvantaged business commercial subcontracting plans.

Unitil Service Corporation, Senior Energy Analyst, Hampton, NH, 2010 to 2015

- Provided analytical support for energy supply solicitations and made recommendations for selection of winning bidders.
- Prepared regulatory filings in support of basic and default service solicitations including written and oral testimony.
- Coordinated electric market operations, data reporting, budgeting and reconciliation with Independent System Operator – New England for two electric distribution companies.
- Oversaw operational and administrative activities associated with all competitive electric supplier activity on two electric utility systems.

Unitil Service Corporation, Senior Regulatory Analyst, Hampton, NH, 1998 to 2010

- Prepared numerous regulatory initiatives and filings before the Maine Public Utilities Commission, the Massachusetts Department of Public Utilities, the New Hampshire Public Utilities Commission and the Federal Energy Regulatory Commission.
- Supported Customer Service and Business Development in meeting customers' needs by investigating inquiries and developing recommendations for solutions.
- Monitored Unitil's competitive position by maintaining a database of potential competitors' pricing strategies for use by Customer Relations and Business Development.
- Served as a company liaison at various industry meetings and regulatory proceedings on behalf of senior management.

Bay State Gas, Rate Analyst, Westborough, MA, 1998 to 1998

- Developed cost-of-gas adjustment filings for Northern Utilities, Inc.

New Hampshire Public Utilities Commission, Senior Economist/Utility Analyst, Concord, NH, 1996 to 1998

- Evaluated all New Hampshire electric utilities' fuel and purchased power adjustment filings before the New Hampshire Public Utilities Commission.
- Prepared, presented and defended written and oral testimony on economic conditions.
- Provided testimony on the cost of capital and other utility-related issues.

PRESENTATIONS

- *"PJM Fundamentals & Operations."* EUCI ISO webinar series, October 8, 2020.
- *"PJM Market Updates & Dynamics."* EUCI ISO webinar series, October 9, 2020.

ACADEMIA

University of New Hampshire – Manchester & Southern New Hampshire University, Adjunct Professor, Manchester, NH, 1992 – Present

- Teach courses in microeconomics, macroeconomics, money and banking, international trade and finance, the regulation of business, public finance, corporate finance, and economics for business.

MEMBERSHIPS

- *University of New Hampshire – Manchester, Business Advisory Board, 2021 to Present.*



John Cochrane

Senior Managing Director

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Education

M.B.A.,
Northeastern
University
B.A. Biology,
Harvard University

Mr. Cochrane specializes in advising gas and electric utility clients in all economic, regulatory, and financial aspects of the business. He has more than 30 years of US and international utility experience. He has testified in rate matters before the FERC and at the state level, has held C-suite and other senior leadership positions at major US utilities, and served as a member of the Board of Directors on a variety of energy sector companies including start-ups.

Mr. Cochrane has extensive utility experience, which includes all areas within corporate finance, mergers and acquisitions, joint ventures, partnerships, restructurings, federal and state regulation, gas and electric supply, and business development, both domestic and international. He has more than 30 years of US and international utility sector experience and has testified in rate case matters relating to capital structure/cost of capital, mergers and acquisitions, and financings before FERC and various state-level regulatory bodies.

During his tenure, Mr. Cochrane's engagements have included the municipal electric and water utility in Jacksonville, JEA, in their pursuit of strategic options, NiSource in the sale of its Massachusetts gas distribution business to Eversource, management audits of National Grid in Massachusetts and New York and of Iberdrola/Avangrid's operations in New York, John Hancock Infrastructure Fund in its acquisition of a solar development company, Liberty Utilities testimony for rate cases in New Hampshire and Missouri on capital structure and cost of capital, and the Puerto Rico Public Private Partnership Authority on its restructuring of the transmission and distribution and generation assets owned by PREPA.

While at National Grid, he led the financial analysis, due diligence, negotiations, and final regulatory approvals for National Grid's acquisitions of Keyspan and RI Gas assets from Southern Union, and Niagara Mohawk. Mr. Cochrane also oversaw finance function integrations for National Grid with NEES, Eastern Utilities Associates, Niagara Mohawk, RI Gas, and Keyspan, creating the second largest US utility at the time with a total enterprise value of \$27B.

As head of Global Business Development and Mergers & Acquisitions for National Grid, Mr. Cochrane led all business development, mergers, acquisitions, divestitures and joint ventures, globally. He was responsible for the sale of a wide range of businesses totaling \$10B; the successful renegotiation of a 15-year, \$4.5B power supply agreement with Long Island Power Authority; and the commercial and regulatory negotiations for a \$3B joint venture with six New York transmission owners. He also led project development and implementation processes for four

£1B submarine interconnectors between the United Kingdom, Norway, Belgium, France and the Netherlands.

Mr. Cochrane has served as a US board member on US/European companies involved in cross-border tax structures including Luxemburg, Ireland, Jersey, Iceland, and Malta.

PROFESSIONAL EXPERIENCE

FTI Consulting, Senior Managing Director, Boston, MA, 2017 to present, with responsibility for leading the Economic and Financial Consulting Power & Utilities team based in Boston. Key projects include:

- Providing cost of capital testimony to support the Granite State Electric (Liberty Utilities) and Energy North (Liberty Utilities) rate cases before the New Hampshire Public Utilities Commission, including analysis of ROE and capital structure.
- Advising the Puerto Rico Public Private Partnerships Authority (P3A) in the development and evaluation of the solicitation to select a third-party T&D operator as well as several concurrent generation asset solicitations. Advisory support includes structuring the T&D Operator contract, evaluating bid submissions, undertaking financial and operations analysis in support of the solicitation processes, among other tasks.
- Providing regulatory advice for the privatization of JEA, a large municipally-owned electric and water utility located in Florida. Advisory support includes advising on regulatory financial treatment of generation and transmission assets and development of financial modeling inputs.
- Advising a large global offshore wind developer on transmission development strategy across the US in order to facilitate offshore wind projects and to diversify business risks.
- Advised Trans Bay Cable, an underwater direct current transmission cable connecting San Francisco, CA to Pittsburg, CA on the reasonableness and methodology of its ROE calculation for the 3-year rate case reset before FERC; provided analysis and expert advice for testimony development.
- Provided expert testimony pertaining to a purchase price dispute stemming from CCI's acquisition of a portfolio of power plants located in PJM.
- Advised PPL Electric Utilities on financial modeling and rate case strategy on the development of transmission projects in PJM.
- Advised global infrastructure fund on financial modeling and rate case strategy applying to a wholly-owned portfolio company, a water utility covering three separate jurisdictions in the U.S. southwest.

National Grid PLC, Executive Vice President – Global Business Development & Mergers and Acquisitions (most recently, among other senior roles), US/UK/Europe 2006-2013. Key projects Include:

- Led all business development, mergers, acquisitions, divestitures and joint ventures globally, including the sale of a wide range of businesses totaling \$10B.
- Led joint venture negotiations, feasibility studies, project budgets and timelines, and vendor selections for four £1B submarine interconnectors between the United Kingdom, Norway, Belgium, France and the Netherlands.
- Led Offshore Wind Transmission (OFTO) bid submittals in the UK.

National Grid USA, 1999 – 2006 Executive Vice President, Chief Financial Officer and Treasurer. Key projects include:

- Supported regulatory approval filings for several M&A deals completed by National Grid including: the sale of New England Electric to National Grid, the purchase of Eastern Utilities by National Grid, the purchase of Niagara Mohawk by National Grid, the purchase of KeySpan Corp by National Grid, The purchase of Rhode Island gas assets of Southern Union Co by National Grid, helping to create the second largest US utility with a total enterprise value of \$27B.
- Testified on behalf of National Grid with respect to capital structure in rate cases, in all National Grid state jurisdictions, including New Hampshire, Massachusetts, Rhode Island, New York and before FERC.
- Testified as a witness with respect to ROE for a rate case in New Hampshire on behalf of Granite State.
- Testified on behalf of National Grid with respect to debt and equity financings including first mortgage bonds, bank agreements, private placements, common equity issuances in all National Grid state jurisdictions, including New Hampshire, Massachusetts, Rhode Island, New York and before FERC.
- Managed ROE expert testimony preparation on behalf of National Grid in all National Grid state jurisdictions, including New Hampshire, Massachusetts, Rhode Island, New York and before FERC.
- Managed the preparation of FERC ROE filing for two DC transmission lines from Canada in New Hampshire and Massachusetts.
- Testified in arbitration case involving new power company, New England Energy and Keystone Shipping over a coal shipping joint venture dispute.
- Testified in arbitration case involving Hydro Quebec and ISO New England over transmission agreements dispute for HQ Phase I and Phase II projects.
- Ran the sale process on behalf of National Grid for Granite State and EnergyNorth, purchased by Liberty Utilities.

- Led the commercial and regulatory negotiations for formation of a \$3B FERC regulated Transco amongst the six New York transmission owners.
- Key member of deal team closing a \$2.5B generation portfolio in the US northeast, responsible for portfolio valuation and complementary insights from indicative bid through closing the transaction.
- Served as a U.S. board member on US/European companies involved in cross-border tax structures including Luxemburg, Ireland, Jersey, Iceland and Malta.

New England Electric Systems, Treasurer (most recently, among other senior roles), Westborough, MA, 1981-1999.

BOARD OF DIRECTORS MEMBERSHIP

EMERA US Subsidiaries, Member, Board of Directors, 2015 – present

PowerOptions, Board of Directors (Audit and Strategic Planning Committees), 2013 – present

GreenerU, Inc., Member, Board of Directors, 2011 – 2013

National Grid USA, Member, Board of Directors, 2000 – 2013



Ken Sosnick

Managing Director

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Education

B.S., Accounting,
Indiana University
of Pennsylvania

Ken Sosnick is a Managing Director at FTI Consulting and is based in Boston. Mr. Sosnick has more than 17 years of experience with electric utility, natural gas pipeline and crude/product pipeline industry matters before the Federal Regulatory Commission (FERC).

Prior to joining FTI, Mr. Sosnick spent over 5 years as a consultant extensively engaged in the natural gas, crude/product and electricity markets. His work included analysis of natural gas pipeline and crude/product pipeline cost of service rates, market-based rates, discounted and negotiated rates, incremental vs. rolled-in project costs, initial certificate rates, allocation of corporate overhead costs, master-limited partnership income taxes, throughput/system rate design quantities, fuel recovery mechanisms, NGA Section 5 rate complaints, Return on Equity calculations under the DCF/Risk Premium/CAPM/Expected Earnings methods, depreciation rate and negative salvage rate calculations, Asset Retirement Obligations, FERC Form 1 and 2 filing requirements as well as being proficient in the application of FERC's Uniform System of Accounts.

Mr. Sosnick served as a panelist for the Liquid Shippers Group in Docket No. RM15-19-000 seeking revisions to the FERC Form 6 Page 700 as well as addressing FERC's regulation of common carrier liquid pipelines including the review of liquid markets and specifically understanding product pipeline pro-rationing policies.

Mr. Sosnick has prepared expert testimony for proceedings at FERC as well as expert reports assessing and quantifying damages in civil litigation, conducted strategic analysis for a large energy company considering alternatives for its existing pipeline and storage portfolio. In addition, he conducted confidential buy-side valuations and assessments of regulated electric and natural gas utilities in the U.S.

Mr. Sosnick has also written a whitepapers, an example is discussing the regulatory and rate impacts of the Tax Cuts and Jobs Act on FERC regulated assets as well as a whitepaper on the impacts of FERC Orders in SFPP, LP Docket No. IS08-390 related to Master Limited Partnerships and other pass-through entities income tax allowance.

Mr. Sosnick spent 10 years at FERC in which he spent two years as an auditor in the Office of Enforcement, and 8 years as an expert witness and one of the lead technical staff negotiators on major electric utility proceedings, interstate natural gas pipeline and crude/product pipeline in the Office of Administrative Litigation. Mr. Sosnick's insights were incorporated into the revision of the FERC Form 2 in

Docket No. RM07-9-000, which lead to the FERC-initiated Section 5 natural gas pipeline proceedings from 2009 to today.

Mr. Sosnick currently teaches an executive FERC Natural Gas 101 course for EUCI, and previously taught at the New Mexico State University Center for Public Utilities Practical and Regulatory Training for the Natural Gas Interstate Pipeline Industry specifically addressing FERC requirements for determining “Just and Reasonable” rates.

PROFESSIONAL EXPERIENCE

- *FTI Consulting*, Managing Director, Boston, MA, 2019 – Present
- *Concentric Energy Advisors*, Senior Project Manager, Marlborough MA, 2015 – 2019
- *MRW & Associates, LLC, Energy Consultants*, Senior Project Manager, Oakland, CA, 2013 – 2015
- *Federal Energy Regulatory Commission*, Energy Industry Analyst, Office of Administrative Litigation, Washington, D.C., 2005 – 2013
- *Federal Energy Regulatory Commission*, Auditor, Office of Enforcement, Washington, D.C., 2003 – 2005

SELECTED PROJECTS

Cost of Service: *Natural Gas, Electric and Liquids Experience*

Mr. Sosnick assists clients, state regulatory agencies, and other experts developing and refining cost of service models regarding rate base calculations, appropriate levels of operations and maintenance expenses, appropriate levels of directly assigned or allocated affiliated or parent company overhead costs, the application of cost allocation procedures in the allocation of costs between jurisdictional activities, between non-jurisdictional and jurisdictional activities or amongst separate jurisdictional systems.

Cost Allocation & Rate Design: *Natural Gas, Electric and Liquids Experience*

Mr. Sosnick assists clients, regulatory agencies, and other experts developing and refining cost allocation and rate design models.

Regulatory Policy & Strategic Analysis: *Natural Gas and Electric Experience*

Utilizing his background in accounting, regulatory affairs, and the nuances of the energy sector, Mr. Sosnick has helped clients ensure they are charging or paying appropriate rates, under terms and conditions that are just, reasonable and not unduly discriminatory or preferential. In addition, Mr. Sosnick helps clients develop safe, reliable and efficient energy infrastructure that serves the public interest.

Tariffs: *Natural Gas, Electric and Liquids Experience*

- Analyzed Open Access Transmission Tariff formula rates to verify conformity to FERC's Uniform System of Accounts and the structure of their formula had FERC's approval
- Participated in the review and refunding of Southern Company's RTO Development Costs that were collected erroneously through their Open Access Transmission Tariff, Unit Power Sales Agreements, and Transmission Service Agreements
- Confidential Client; Review of a SPP Member's ATRR to provide an opinion on the appropriateness of the inclusion of certain costs
- Confidential Client; Review of multiple entities RTO/ISO Formula Rates to ensure compliance with current FERC precedent
- Served the role of advisor to clients to internal FERC Trial Staff on settlements on FERC wholesale electric, liquid pipeline and natural gas pipelines Tariff matters

Negotiations: *Natural Gas, Electric and Liquids Experience*

- Coordinated Pre-filing Settlement negotiations on behalf of a firm storage customer in a state rate proceeding in the western US
- Facilitated the settlement of the refund amounts associated with the sale and related costs of the portion of the Kewaunee Nuclear Power Plant owned by Wisconsin Public Service Corp.
- California Independent System Operator Corporation, ER05-150: Reviewed the Utility Distribution Company Operating Agreement to ensure compliance with FERC precedent and coordinated with all parties to confirm understanding of commitments being filed
- PG&E, ER05-130: Reviewed the CASIO requirements and Western Interconnection Agreement as well as the FERC precedent to assist TPUD and PG&E to reach a settlement resolving the interconnection issue
- KO Transmission Company, Docket No. RP16-1097-000: Filed testimony on behalf of KO Transmission and served as the Rate Case Filing/Settlement Coordinator
- Served the role of lead FERC Trial Staff Technical Witness on settlements on FERC wholesale electric, liquid pipeline and natural gas pipelines related to cost of service and cost allocation and rate design

PRESENTATIONS

- Panelist EBA-Section 5 Perspectives, January 2018

- FC Intelligence-Natural Gas Impact, Transportation Options and Regulatory Oversight, May 2016
- Western States Association of Tax Administrators, four presentations between 2015 to 2017
- Panelist, “Will Fracking Change the Gas Pipeline Flows in Ways that Affect Rate Design and Cost Allocation?” EBA Mid-Year Meeting, November 2014
- Panelist at the FERC Commission Open Meeting for the Revisions to the FERC Form 2, Docket No. RM07-9-000, 2009



C. Drew Cayton

Director

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Education

B.A. in Political
Science, University of
North Carolina at
Wilmington

M.P.A. in Public
Economics and Policy
Analysis, University of
North Carolina at
Wilmington

Drew Cayton is a regulatory subject matter expert advising clients in power and gas industries in jurisdictions throughout North America. Mr. Cayton has industry expertise in regulatory policy and rate making, with more than 10 years of investigation, litigation, and negotiation experience in matters set before the Federal Energy Regulatory Commission (“FERC” or “Commission”) and various state commissions.

Prior to joining FTI, Mr. Cayton spent 3 years as a consultant advising commercial, industrial, municipal, and utility clients on regulatory impacts at both the state and federal levels. His work included investigating and analyzing utility and pipeline cost-of-service, cost allocation and rate design, depreciation, rate of return, and billing determinates.

Mr. Cayton spent 7 years as an Energy Industry Analyst (Litigation) in FERCs Office of Administrative Litigation. As a technical case team leader, Mr. Cayton managed diverse teams tasked with executing extensive investigations into the propriety of various rate and tariff proposals before the FERC. He developed sound positions incorporating relevant Commission precedents, policies, rules, and regulations and then defended those positions in settlement and litigation proceedings.

Mr. Cayton holds a B.A. in political science and an M.P.A. from the University of North Carolina at Wilmington. He concentrated his graduate studies in public policy and public economics.

TESTIMONY

- Florida Gas Transmission Company, LLC, Docket No. RP10-21-00: Filed on behalf of FERC Trial Staff on cost-of-service Issues
- Trans-Alaska Pipeline System, Docket No. IS09-348: Filed on behalf of FERC Trial Staff on Throughput, Cost Allocation and Rate Design
- MIGC, LLC, Docket No. RP12-122: Filed on behalf of FERC Trial Staff on Throughput, Cost Allocation and Rate Design issues
- Sierra Pacific Power Company, Docket No. 18-02011: Filed on behalf of Sierra customers on rate making impacts of the Tax Cuts and Jobs Act of 2017
- Liberty CalPeco, Docket No. A17-10-018, Filed on behalf of CalPeco customers on Catastrophic Emergency Memorandum Account cost responsibility

SELECTED PROJECTS

Cost-of-Service. Mr. Cayton assists clients in the development of complex and extensive cost-of-service models and is highly skilled in investigation and analysis of pipeline/utility revenue requirements to include rate base calculations, operating expense normalization, corporate overhead and other intercompany transactions, cost allocation, and taxes.

Natural Gas Experience

- ANR Pipeline, Docket No. 16-440
- Columbia Gulf Pipeline, Docket No. 16-302
- East Tennessee Gas Transmission, Docket No. RP19-63
- Empire Pipeline, Docket No. RP16-300
- Florida Gas Transmission, Dockets No. RP10-21 and RP15-101: Filed Testimony on behalf of FERC Trial Staff
- Great Lakes Gas Transmission, Docket No. RP17-598
- Tallgrass Interstate Gas Transmission, Docket No. RP16-137 and 2019 pre-filed settlement
- Maritimes & North East Pipeline, Docket No. RP15-1026
- Kinder Morgan Interstate Transmission, Docket No. RP11-1494
- MoGas, Docket No. RP18-887
- Northern Natural, Docket Nos. RP10-1448 and RP19-59
- National Fuel, Docket No. RP12-88
- Northwest Pipeline, 2016 Pre-Filed Settlement
- Paiute Pipeline, Docket Nos. RP09-406, RP14-540, and RP19-1291
- Southern Natural, Docket No. RP13-886 and 2017 Pre-Filed Settlement
- Southern Star, 2018 Pre-Filed Settlement
- Trailblazer, Docket No. RP13-1031
- Transcontinental, Docket No. RP12-993
- Transwestern, Docket No. RP15-23
- Tuscarora, Docket No. RP16-229
- Viking Gas Transmission, Docket No. RP19-1340
- Williston Basin Pipeline Company, Docket No. RP14-118

Electric Experience

- Peine vs AEP, Docket No. ER07-1069
- Various Formula Rate Cases
- Nevada Energy/Sierra Pacific ON Line, Docket No. ER13-1605

- City of Shelby, OH 2016 and 2019 cost and revenue analysis
- Sierra Pacific, Docket Nos. 16-06006 and 18-0211
- Liberty CalPeco, Docket No. A.17-10-1018

Cost Allocation and Rate Design. Mr. Cayton assists clients in analyzing the impact of various cost allocation methodologies and rate design proposals to include cost causation matching and billing determinates.

Natural Gas Experience

- MIGC, Docket No. RP12-122: Filed affidavit on behalf of FERC Trial Staff
- MoGas, Docket No. RP18-887
- Northwest Pipeline, 2016 Pre-Filed Settlement
- Northern Border, Docket No. RP18-234
- Northern Natural, Docket No. RP19-59
- Ozark, Docket No. RP11-1495
- Southern Star Central Gas Pipeline, 2018 Pre-Filed Settlement
- Trailblazer, Docket No. RP13-1031
- Transcontinental, Docket No. RP12-993
- Transwestern, Docket No. RP15-23
- Tuscarora, Docket No. RP16-229
- Viking Gas Transmission, Docket No. RP19-1340
- Williston Basin Pipeline Company, Docket No. RP14-118

Electric Experience

- Peine vs AEP, Docket No. ER07-1069
- Various Formula Rate Cases
- City of Shelby, OH 2016 and 2019 cost and revenue analysis
- Sierra Pacific Power Company Docket Nos. 16-06006 and 18-0211
- Liberty CalPeco, Docket No. A.17-10-1018

Oil Experience

- Trans-Alaska Pipeline System, Docket No. IS09-348: Filed on behalf of FERC Trial Staff

PRESENTATIONS

- “New Tax Law and its Impact of Rates – Cost-of-Service” EBA 2018 Annual Meeting



Michelle Hubbard

Senior Director

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Education

B.B.A. Accounting,
Texas A&M
University, College
Station

Certifications

Certified Forensic
Accountant (Cr.FA)

Affiliations

American Institute
of Certified Public
Accountants

Michelle Hubbard is a professional with 25 years of regulatory and utility experience. She has held positions in industry as well as in consulting firms where she has performed services for clients in the natural gas midstream, distribution and electric environments in multiple states and at the federal level.

Ms. Hubbard has extensive experience in financial analysis and compliance issues, including the preparation of documentation in support of litigation and regulatory filings. She specializes in cost of service, corporate costs and the allocation of joint and common costs. She has provided financial analysis and support in gas utility rate proceedings in many state jurisdictions and at the FERC level. She also performs general accounting, analysis, litigation support and contract compliance audits.

PROFESSIONAL EXPERIENCE

FTI Consulting, Senior Director, Boston, MA, 2020-present

- As part of the power and utilities practice, Ms. Hubbard applies her expertise in pipeline regulation, rate-setting, and financial analysis to a variety of power-related projects.
- Participated on a project researching the link between utility decoupling programs and energy efficiency metrics for EnergyNorth's natural gas utility.

MLHubbard, PLLC, Owner/Consultant, Fulshear, TX, 2012-2020. Key Projects include:

- Consulted on Section 4, Section 311 and other FERC Rate Cases, representing customer/customer groups to oppose rate increases. Included developing models, creating data requests, performing analysis, writing testimony and working with attorneys on strategies to negotiate lower rates, researching issues. Paiute, Transco, TETCO, Enable Midstream ("MRT") (2018-2020).
- Performed regulatory and compliance reporting for natural gas midstream companies. Included gas utility taxes, annual Texas Railroad Commission ("RRC") reports, tariff maintenance and filings and RRC audit support. (2012-2020)
- Consulted non-regulated entity on initial setup for conversion to regulated utility, Marabou (2017-2018).
- Performed compliance audit of the Texas State Power Program for the Texas General Land Office. This included assessing the accuracy of

remittances made by retail energy providers to the State of Texas pursuant to their contractual obligations to provide electrical power service to Public Retail Customers participating in the State Power Program. Reviewed contracts and performed analysis, including the recalculation of bills in accordance with contract terms, and performed audit sampling and testing for an annual remittance to the GLO in excess of \$10million. (2008-2015)

Dively & Associates, Partner, CFO & Consultant, Austin, TX, 2003-2012. Key Projects include:

- Performed regulatory and compliance reporting for natural gas midstream and distribution companies including tariffs, gas utility taxes, annual reports and RRC audits. Reporting and compliance in states of Texas, Louisiana, Mississippi and Alabama.
- Performed general accounting and gas accounting for a natural gas distribution system.
- Performed compliance audit for Texas General Land Office State Power Program.
- Analyzed the books and records of a natural gas marketing company that is regulated by the RRC; developed procedures to conform them to Federal Energy Regulatory Commission (“FERC”) Accounting, after its acquisition of several small utilities; required the restatement of four years of financial statements and the filing of four years of RRC reports for four different utility entities; set up a separate utility ledger and automated processes by writing allocations and reports.
- Conducted a study of the corporate level costs of a natural gas midstream company to appropriately allocate them to the different entities of the company; these allocated costs were used in three different FERC 311 rate filings in two different states.
- Helped review the gas cost filing of a natural gas utility in the State of Nebraska; involved analyzing data from many different sources, reconciling that data, submitting data requests, reviewing data for completeness and materiality and selecting samples for review.
- Participated on the team of accountants representing the Texas General Land Office in its intervention into the TXU rate case filed in the summer of 2003; performed extensive research and analysis of the TXU case as it applies to the GLO and its customers and supported the legal team in its strategies and approaches.
- Provided analysis and support to clear audit violations in Texas Railroad Commission audit. TGG Pipeline (2008)

- Developed processes to support regulatory requirements in connection with conversion to PeopleSoft Accounting Systems. Crosstex Energy Services (2006)
- Worked with several different natural gas pipeline companies resolving various disputes; worked with the clients and their attorneys, and the RRC to successfully resolve the issues to the satisfaction of all parties.

The Psychological Corporation, Consultant, San Antonio, TX, 2002-2003

- Worked on the company's post accounting conversion to PeopleSoft; personally identified that the company was following two separate budgets, one for projects and one for financial and neither was being integrated with the other.

SoCo Consulting, Consultant, Austin, TX, 2001-2002

- Performed four school performance reviews for the Texas State Comptroller's Office Texas School Performance Review; the proposed recommendations resulted in millions in savings to the districts that they were able to redirect into education-related programs.
- Performed analysis for litigation regarding overpayment of insurance premiums.

Resource Connection, Consultant, Austin, TX, 2001

- Temporary controller for start-up.
- Lead consultant on inventory project to investigate and resolve a \$1million discrepancy; through analysis, personally identified the discrepancy did not exist.

Consulting Dynamics Group, Consultant, LLC Austin, TX, 1998-2001

- Prepared initial rate case filings for natural gas distribution company in 24 North Texas cities.
- Was responsible for the quarterly allocation of over \$35million in shared corporate costs of a natural gas distribution company, providing the highest possible return to all entities.
- Prepared schedules and analysis for rate cases for general rate increases in Texas and Missouri.

Southern Union Gas Company, Austin, TX. Budget Supervisor, 1995-1998;

General Ledger Accountant, 1994-1995

- Coordinated the annual revenue, expense and capital budgets for multi-state and multi-jurisdictional operations of the natural gas distribution company.
- Participated as a member of an internal audit team that audited and developed policies and procedures surrounding the billing and remittance of revenue-related taxes for one million of its utility customers; analyzed

historical RRC reports and compiled supporting workpapers for use in litigation matters of the company.

- Worked on several rate cases for general rate increases in multiple states.
- Performed variance analysis and account analysis for expense and revenue budgets.
- Worked with operational departments and divisions to develop budgets.
- Consolidated division and department budgets into corporate budget using Microsoft Excel.
- Responsible for creating and maintaining revenue forecasting models, including customer growth and weather normalization.
- Maintained the company's FERC chart of accounts.
- Participated in an accounting authoritative filing with analysis of S2K capital costs.



Chelsea Osinchuk

Senior Director

chelsea.osinchuk@fticonsulting.com

200 State Street
9th Floor
Boston, MA 02109

Education

Master's in
Economics, University
of British Columbia
(UBC), Canada
Bachelor of
Commerce in Finance
and Mathematics,
Sauder School of
Business, University
of British Columbia
(UBC), Canada

Chelsea is a Senior Director in FTI's Power and Utilities practice within Economic Consulting. An economist by background, she has specialized knowledge in electricity and gas markets, regulation design, cost of capital analysis, infrastructure transactions and public policy development. Her project experience includes providing infrastructure developers with strategic advice for ISO market entry, developing cost benefit models on behalf of policymakers and conducting financial models and evaluations for a range of energy projects.

Chelsea has provided economic and financial advice for clients such as merchant and regulated energy and utility companies, infrastructure funds, private equity investors, utility regulators, policy makers and multilateral organizations. Her economic and financial consulting experience spans North America, UK, Europe, Middle East, Asia and Australia.

Prior to joining FTI in 2018, Ms. Osinchuk worked as an Economic Consultant for Cambridge Economic Policy Associates (CEPA) in London, UK. She also previously worked in the capital markets division of a large multi-national investment bank.

PROFESSIONAL EXPERIENCE

- *FTI Consulting*, Senior Director, Boston MA, 2021 – Present
- *FTI Consulting*, Director, Boston MA, 2018 - 2021
- *Cambridge Economic Policy Associates (CEPA)*, Economic Consultant, London UK, 2015 - 2018
- *Clinton Foundation*, Economic Development Intern, New York NY, 2014
- *RBC Capital Markets & HSBC*, Analyst Rotational Program, Toronto ON, 2011 - 2012

SELECTED ENGAGEMENTS

- **Generation Strategy and Revenue Modeling in NYISO, USA**

Advised a confidential developer on strategy to facilitate future offshore wind development in NYISO; in particular, assisted in the client's understanding the NYISO capacity market auction and various sources of revenue for renewable generation projects within New York State.

- **Buyer Due Diligence for Merchant Asset in NYISO & PJM, USA**

Projected 25 years of contracted and merchant revenues for a US transmission line straddling NYISO and PJM. Modelled resulting gross margin with consideration to contractual structure and associated risks.

- **PJM Capacity Market Auction Strategy, USA**

As part of FTI's advisory work to the Unsecured Creditors Committee in the FirstEnergy Solutions (FES) bankruptcy proceedings, assessed various capacity market bidding strategies for FES's nuclear and fossil plants within PJM.

- **California Offshore Wind Strategy, USA**

Advising a confidential European developer on opportunities related to renewable energy projects, specifically offshore wind, in California. Analyzing economic benefit of reducing local capacity resource adequacy requirements, providing price and flow analysis for nodal, zonal and intertie points in CAISO, summarizing processes for project development within CAISO, LADWP and WestConnect.

- **Solar Company Regulatory Due Diligence, USA**

Providing regulatory due diligence for a confidential institutional investor involved in a buyer due diligence process for a utility scale solar development company. Analyzing regulatory considerations within development pipeline of potential PPAs.

- **Study on Transmission Participation in Capacity Market, UK**

Undertook analysis to measure the contribution of interconnectors, cross-border subsea HVDC transmission lines, to security of supply in Great Britain for participation in the GB capacity market. The analysis to assign an accurate de-rating factors for bidding into the capacity market. Authored a report on behalf of National Grid Ventures for submission to the Department for Business, Energy & Industrial Strategy (BEIS).

- **Review of Transmission Framework, Department of Energy & Environment Australia**

Advising on international frameworks of electricity transmission development to draw out possible lessons for the planning and delivery of transmission in the NEM, focusing on the US workstream, bringing expertise in US transmission delivery frameworks, within each ISO/RTO and at the FERC level, and providing insight into various policy and regulatory support mechanisms that have encouraged transmission investment.

- **OFTO Cost Benefit Analysis for Tender Rounds One to Three, UK**

Modeled the economic benefit of the Offshore Wind Transmission (OFTO) competitive tendering regime on behalf of Ofgem. Considered five counterfactual arrangements including merchant ownership and incumbent

onshore regulation (National Grid Electricity Transmission). Calculated that the consumer benefits from competitive tendering are primarily derived from the ability of OFTO owners to achieve more competitive, de-risked project financing. Secondly, OFTO owners achieved more competitive O&M contracts.

- **Transaction Support for Transmission Asset, USA**

On behalf of an investor-owned utility in the Northeast US, modeled the strategic and financial implications from the purchase of a transmission asset and formed a recommendation based on results. Considered the impact on ratepayers and helped prepare Federal Energy Regulatory Commission (FERC) transaction filing.

- **Unsecured Creditor Committee of PG&E Chapter 11 Bankruptcy Process, USA**

Analyzing various components of PG&E's business plan strategy through the Chapter 11 Bankruptcy process. In particular, developed a model for power purchase agreements (PPAs) using publicly available information to estimate value of outstanding exposure to PPAs and estimate potential savings from renegotiation strategies. Analysis of CAISO and CPUC interactions with PG&E with regard to wholesale market and RPS targets.

- **NYISO Capacity Market Mitigation Affidavit for Equinor, USA**

FTI was engaged by Equinor for representation in proceedings before FERC regarding proposed changes to NYISO's rules for capacity market mitigation. Chelsea assisted in the development of an affidavit which explained how certain aspects of the proposed rules would allow for the development of state-sponsored renewable resources without eroding the effectiveness of competitive markets.

- **Privatization Process for Electric T&D and Generation Assets, Puerto Rico**

Advising the Puerto Rico Public Private Partnerships Authority (P3A) in the development, administration and evaluation of the T&D procurement process aimed at hiring a third-party T&D operator and several concurrent new generation development solicitations. Chelsea is leading the development of the Confidential Information Memorandum to distribute to potential bidders. In addition, she is evaluating responses to RFQs and RFPs and assisting in development of the contracts and undertaking project feasibility economic analysis for new potential generation solicitations.

- **Empire-Liberty Capital Structure Testimony, USA**

Assisted in the development of capital structure testimony to support Empire-Liberty in Case No. ER-2019-0374.

- **Florida Deregulation Study, USA**

On behalf of EnergyFairness, authored an independent report outlining the potential costs to the Florida State Government of deregulating the Florida energy market, opening up the market to retail competition. Our assessment included consideration of the loss of various sources of tax revenue collected from utilities, the cost of setting up and running an ISO/RTO and the incidence of stranded costs.

- **Buyer Due Diligence for National Grid Gas Distribution, UK**

Advised a private infrastructure investor on economic and regulatory due diligence for the acquisition of a majority stake in National Grid's Gas Distribution business. Focused on the cost of capital analysis workstream considering the future path of regulatory cost of capital decisions and their impact on the valuation of the gas distribution assets.

- **Inflation Forecasting for Energy Networks Australia, Australia**

Conducted a review of the Australian Energy Regulator's approach to forecasting inflation in price controls, using breakeven inflation implied from inflation-linked treasury bonds. Identified implicit biases within the breakeven inflation calculation and proposed alternative methods for the regulatory treatment of inflation.

- **OFTO Competitive Procurement Bid Evaluation, UK**

Evaluated infrastructure investor bids for the five Offshore Wind Transmission (OFTO) assets in Tender Round Five including 565MW Race Bank and 659MW Walney Extension to award Preferred Bidder. Provided transaction advice to Ofgem from Preferred Bidder announcement to Financial Close. Conducted evaluations of all financial and commercial aspects of bidder submissions through Enhanced Prequalification and Invitation to Tender phase. Assessed robustness of financing strategies, interest rate commitment, hedging strategies and O&M agreements.

- **OFTO Strategic Review of Procurement Process, UK**

Following the completion of several phases of Offshore Wind Transmission (OFTO) Tender Round Five evaluations, a select group of the evaluation team was asked to undertake a strategic review of the procurement process. The review proposed changes that would allow new entry of infrastructure investors, provide value to electricity consumers and ensure robustness of the offshore wind supply chain.

- **Cost of Capital Framework for Ofgem's RIIO-2 Transmission & Distribution Price Control, UK**

Prepared a formal submission for Ofgem (the Great Britain electricity and gas regulator) to establish a re-designed cost of capital framework across all gas and electricity transmission and distribution for the upcoming RIIO-2 price controls. The analysis combined and weighted various ROE models and

compiled regulatory precedent, academic literature and real market data to arrive at a range of potential cost of equity values.

- **Regulatory Price Control Review for Five Electricity Distribution Companies, Oman**

Managed the finance workstream, designed retail incentive mechanisms and contributed to the cost assessment benchmarking to set four-year price controls for the five regional monopolist electricity distribution and supply companies in Oman. Developed the regulatory financial model that determines the revenue requirement for the five distribution companies.

- **Retail Price Cap Policy Development for Ofgem, UK**

Seconded to Ofgem to assist in the policy development of the retail price cap design and implementation. Designed the smart meter cost assessment methodology, coordinating between retail supply companies, the Department for Business, Energy & Industrial Strategy (BEIS) and the Ofgem executive team.



Ian R. McGinnis

Consultant

ian.mcginis@fticonsulting.com

200 State Street
9th Floor
Boston, MA 02109

Education

M.S. Environmental
Economics, University
of New Hampshire

B.A. Economics,
Lebanon Valley
College

Ian is a Consultant in FTI's Power and Utilities practice within Economic Consulting. His economic consulting experience includes research and analytical support on a range of matters including utility financial modeling, natural gas and electric rate cases, and data analysis for litigation support.

Prior to joining FTI, Ian obtained his master's degree in Environmental Economics from the University of New Hampshire where he conducted research related to quantifying the economic impact of environmental changes to landscapes.

PROFESSIONAL EXPERIENCE

- *FTI Consulting*, Consultant, Boston MA, June 2019 – Present
- *University of New Hampshire*, Research Assistant, Durham NH, 2017 – 2019

SELECTED PROJECTS

- **Management Audit**
Provided research and analytical support on the management audit of National Grid for the Massachusetts Department of Public Utilities. Tasks included interview notetaking and report writing.
- **Gas Market Modeling**
Currently developing FTI's natural gas market model, a proprietary version of the Gas Pipeline Competition Model (GPCM).
- **Return on Equity Testimony**
Assisted in the development of the Return on Equity model and testimony for EnergyNorth and St. Lawrence Gas on behalf of Liberty Utilities. Cost of equity estimation models employed include discounted cash flow and capital asset pricing model.
- **Electric Rate Case Testimony**
Provided research and analytical support for expert testimony analyzing the Multi-Year Rate Plan filed by the Potomac Electric Power Company by analyzing risks and costs to customers.
- **Data Analysis for Litigation Support**
Analyzed several years' worth of hundreds of pharmaceutical courier's data to develop a systematic approach to estimating damages owed based on alleged underpayments by their employer. Assisted in writing expert reports and deposition preparations of an expert witness in regard to alleged

underpayments to pharmaceutical couriers. Have recovered \$4.5 million in damages to date.

- **Financial Model Development**

Assisted in debt, equity, plant, and depreciation modeling for the redevelopment of the cost-of-service forecast model for an electric utility.

Supported the development of the pro forma balance sheet model which was provided to potential bidders for the privatization of a municipal electric and water utility.

Appendix II: Cost and Pricing Support

REDACTED

Northern Utilities, Inc.
New Hampshire Division
d/b/a Unitil
Request for Proposal

Area 1: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization

Attachment 1

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration			
Research			
Analyses or Studies			
Other Direct Costs			
Total Not To Exceed (through filing)			
Respond to Discovery			
Assist in the Interrogation of Testimony			
Prepare Rebuttal Testimony			
Attend Hearings			
Respond to In-Hearing Record Requests			
Assist in Drafting of Legal Brief			
Other Direct Costs			
Total Cost Estimates (post-filing) ⁽²⁾			
Grand Total			

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.
- (2) Post-filing activities to be billed on a time-and-materials basis as detailed in Section 5 of the proposal.

REDACTED

Northern Utilities, Inc.
New Hampshire Division
d\b\ a Unutil
Request for Proposal

Area 2: Revenue Decoupling
Attachment 2

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration			
Research			
Analyses or Studies			
Other Direct Costs			
Total Not To Exceed (through filing)			
Respond to Discovery			
Assist in the Interrogation of Testimony			
Prepare Rebuttal Testimony			
Attend Hearings			
Respond to In-Hearing Record Requests			
Assist in Drafting of Legal Brief			
Other Direct Costs			
Total Cost Estimates (post-filing) ⁽²⁾			
Grand Total			

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unutil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unutil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.
- (2) Post-filing activities to be billed on a time-and-materials basis as detailed in Section 5 of the proposal.

REDACTED

Northern Utilities, Inc.
New Hampshire Division
d\ b\ a Unutil
Request for Proposal

Area 3: Return on Equity
Attachment 3

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	█ █		
Research	████		
Analyses or Studies	████		
Other Direct Costs	\$ █		
Total Not To Exceed (through filing)		████	
Respond to Discovery	█		
Assist in the Interrogation of Testimony	█		
Prepare Rebuttal Testimony	█		
Attend Hearings	█		
Respond to In-Hearing Record Requests	█		
Assist in Drafting of Legal Brief	█		
Other Direct Costs	█		
Total Cost Estimates (post-filing) ⁽²⁾		█	
Grand Total			█

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unutil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unutil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.
- (2) Post-filing activities to be billed on a time-and-materials basis as detailed in Section 5 of the proposal.

REDACTED

Northern Utilities, Inc.
Rate Case Consulting Services Agreement

THIS AGREEMENT for the provision of Consulting Services (“Agreement” or “Consulting Services Agreement”), made and entered into on May 11, 2021, by and between Northern Utilities, Inc. (“Northern” or “the Company”), a New Hampshire public utility corporation with its principal place of business at 6 Liberty Lane West, Hampton, NH 03842 and **FTI Consulting, Inc.** (“Consultant”), having a place of business at 200 State Street, 9th Floor, Boston, MA 02109.

1. Services and Deliverables

Consultant will provide the following services to the Company and furnish the following deliverables (the “Services”): **Return on Equity**, as described in Unitil’s Rate Case Studies RFP No. USC-42021, and any attachments thereto, as may be modified from time to time by mutual consent, evidenced in writing and signed by both parties.

2. Do Not Exceed Costs

As provided in the Consultant’s Response to the RFP dated May 3, 2021, for the **Return on Equity**, the cost through the Company’s filing of its rate case shall not exceed [REDACTED]

3. Independent Contractor

Consultant is an independent contractor and not an employee or agent of Northern, Unitil Corporation or any subsidiary thereof. Consultant assumes full and sole responsibility for the payment of all compensation and expenses of its employees and for all of their state and federal income tax, unemployment insurance, Social Security, payroll and other applicable employee withholdings.

4. Subcontractors

The Company reserves the right to refuse to permit any person or organization (subcontractor) to participate in the work covered by this Contract, such refusal shall not be unreasonably imposed. No subcontract, if approved by the Company, shall relieve the Consultant of any liabilities or obligations under the Agreement, and the Consultant agrees that Consultant is

fully responsible to the Company for the acts and omissions of Consultant's subcontractors and of persons employed by them. Consultant shall require every subcontractor to comply with the provisions of the Agreement, including the Mutual Confidential Non-Disclosure Agreement. Notwithstanding the foregoing, (a) Consultant may subcontract with an entity that is wholly owned and controlled by or under common control with Consultant so long as Consultant's obligations under this Agreement remain unchanged by any such subcontracting; and (b) Consultant may utilize the services of third parties without obtaining Northern's consent in connection with (i) data retrieval, storage and transmission; (ii) the support of Consultant's data center operations (including, but not limited to, uptime monitoring, business continuity, security testing and disaster recovery); and (iii) products licensed by Consultant for its delivery of Services.

5. Supervision

Consultant shall perform the Services with reasonable care in a diligent and competent manner. Consultant shall maintain control over its employees and all of its subcontractors.

6. Liability and Indemnification

The Consultant agrees to indemnify, hold harmless and defend the Company, its parent, subsidiaries and affiliates and their respective employees, agents, officers, and directors, from and against any and all liability for loss, damages, fines, penalties, claims, actions, proceedings, expense, or cost, including but not limited to attorney's fees and litigation expenses, which may be asserted against the Company or which the Company may incur or be held liable by reason of:

- bodily injury, including death, sustained by or alleged to have been sustained by any person or persons, including but not limited to employees of the Company, employees of the Consultant, employees of any subcontractor or any other third parties, and without regard to whether the person or persons are working within the scope of their employment;
- damage to property;
- personal injury, including but not limited to, false arrest, false imprisonment, or violation of privacy rights;

- any unlawful employment practice of the Consultant or any subcontractor, including without limitation, employment discrimination, wrongful discharge, termination of employment or violation of state or federal statutes or regulations relating to employment practices; or

resulting from the acts and/or omissions of Consultant or subcontractor, its employees, agents, subcontractors or those under its or their control, and/or arising out of or in any manner connected with the performance of this Agreement or the operations to be performed under this Agreement to the extent such injury or damage is caused by or is attributable in whole or in part to any act or omission of the Consultant, its affiliates or its or their employees or agents or those under its or their control; provided, however, that the Consultant shall not be held responsible for damage to private property when such damage results from the Consultant's having carried out in a proper workmanlike manner instructions received from a duly authorized representative of the Company as to the use to be made of, or act to be performed on, such private property.

The Company agrees to indemnify and hold harmless Consultant and any of its subsidiaries and affiliates, officers, directors, principals, shareholders, agents, independent contractors and employees from and against any and all claims, liabilities, damages, obligations, costs and expenses (including reasonable attorneys' fees and expenses and costs of investigation) resulting from the acts and/or omissions of Company and/or arising out of or in any manner connected with the performance of this Agreement to the extent such claims, liabilities, damages, obligations, costs and expenses are caused by or are attributable in whole or in part to any act or omission of the Company, its affiliates or its or their employees or agents or those under its or their control.

Excluding a party's indemnification obligations for third party claims, neither party shall be liable to the other party under this Agreement for (a) damages in excess of the total amount of the fees paid or payable to Consultant under this Agreement, or (b) punitive or consequential damages of any kind.

7. Payment

Payment for services rendered shall be at the billing rate or rates as set forth at Page 12 of the Consultant's Response to the RFP dated May 3, 2021. Consistent with the requirements of the New Hampshire Public Utilities Commission, the Company requires detailed hourly billing that will withstand the scrutiny of the Commission for rate case cost recovery. This means that bills should be detailed enough to justify cost recovery to the Commission while not divulging litigation work product, and shall at a minimum include the number of hours worked, the billing rate, and the specific nature of services performed. All other out-of-pocket expenses, including cost of travel or travel-related expenses, telephone, duplication, and delivery costs ("Other Direct Costs") should be tracked and identified separately on bills. The Company will remit payment on all appropriate invoices within thirty (30) days of receipt. Further, if Consultant and/or any of its employees are required to testify or provide evidence at or in connection with any judicial or administrative proceeding relating to this engagement to which Consultant is not a party, Company will compensate Consultant at its regular hourly rates and reimburse Consultant for reasonable direct and allocated expenses (including counsel fees) with respect thereto. In addition to any other remedies set forth above, and any other remedies available at law, Consultant reserves the right to halt further services until payment is received on past-due invoices. Company agrees to pay all court costs, attorney fees and other expenses which may be associated with the collection of undisputed unpaid invoices.

8. Confidentiality

Consultant acknowledges and agrees that due to the unique nature of this Agreement, Consultant shall be required to enter into a separate Mutual Confidential Non-Disclosure Agreement with Company in the form attached hereto as Attachment 1.

9. Non-Solicitation

During the term of this engagement, and for a period of one year following its expiration or termination, Consultant and the Company will not directly or indirectly solicit, employ or otherwise engage any each other's employees (including former employees) or contractors who were involved in the engagement. Nothing in this Section 9 prohibits a party from hiring

any employee or other personnel of the other party who responds to a general solicitation of employment not specifically directed to such person or who approaches such hiring party on a wholly unsolicited basis.

10. Complete Agreement

This Agreement constitutes the complete agreement between the parties on the subject matter identified herein, and supersedes all prior oral and written communications between the parties, and may be amended, modified or changed only in writing when signed by both parties. No term of this Agreement will be deemed waived, and no breach of this agreement excused, unless the waiver or consent is in writing signed by the party granting such waiver or consent.

11. Compliance with Laws

Each of the Company and Consultant warrants that, in performing work under and otherwise in connection with this Agreement, each will comply with all applicable laws, rules and regulations of governmental authorities and agree to indemnify and save each other harmless from and against any and all liabilities, claims, costs, losses, expenses, and judgments arising from or based on any actual or asserted violation by the other party of any such applicable laws, rules and regulations.

12. Assignment

Northern and Consultant agree that neither this Agreement nor any interest herein shall be assigned or transferred except with the prior written approval of the other party.

13. Governing Law

The rights of the parties hereto and the construction and effect of this contract shall be subject to and determined in accordance with the laws of the State of New Hampshire without reference to choice of law principles. Northern and Consultant irrevocably and unconditionally agree to waive a trial by jury in any action, proceeding or counterclaim arising out of or relating to this Agreement.

14. Severability

If any particular provision of this Contract be rendered or declared invalid by a court of competent jurisdiction of the State of New Hampshire, such invalidation of such part or portion of this Contract should not invalidate the remaining portions thereof, and they shall remain in full force and effect.

NORTHERN UTILITIES, INC.

By: Robert B. Hevert

Robert B. Hevert

NAME (PRINT OR TYPE)

TITLE: Sr. Vice President

Date: June 10, 2021

FTI CONSULTING, INC.

By: Matthew DeCourcey

Matthew DeCourcey

NAME (PRINT OR TYPE)

TITLE: Managing Director

Date: June 11, 2021

ATTACHMENT 1:
MUTUAL CONFIDENTIAL NON-DISCLOSURE AGREEMENT

This MUTUAL CONFIDENTIAL NON-DISCLOSURE AGREEMENT is made as of May 11, 2021 between **FTI Consulting, Inc.** ("Consultant"), having a place of business at 200 State Street, 9th Floor, Boston, MA 02109, and **Northern Utilities, Inc.** ("the Company") having a principal place of business at 6 Liberty Lane West, Hampton, NH 03842, (together "the Parties," individually "a Party"). The Parties hereby agree that disclosures of confidential information shall be governed by the following terms and conditions. A Party receiving information under this Agreement is referred to as "Recipient," and a Party disclosing information is referred to as "Discloser."

1. Definition of Confidential Information "Confidential Information" means any oral, written, graphic or machine-readable information including, but not limited to, any and all confidential and proprietary information, including all information or material that has or could have commercial value or other utility in the business or the prospective business of the Discloser, disclosed by the Discloser to the Recipient in connection with this Agreement, whether committed to memory or embodied in writing or other tangible form. Confidential Information includes, without limitation, contracts, fees, accounts, records, customer and client information, agreements and any other incident of the Discloser's business disclosed to the Recipient, which Confidential Information is clearly marked or identified as being "confidential" or "proprietary" (or a similar restrictive legend). Confidential Information does not include any information which Recipient can document: (a) is known to Recipient at the time of disclosure; (b) is independently developed by Recipient without use of the Confidential Information; (c) becomes known to Recipient from another source without confidentiality restriction on subsequent disclosure or use; (d) is or becomes part of the public domain through no wrongful act of Recipient; or (e) is information approved for disclosure or release by the Recipient by written authorization from the Discloser. Confidential Information does not include any source code or technical information subject to a license that meets the requirements of the Open source Definition. The Open Source Definition is found at <http://www.opensource.org/osd.html>.

2. Purpose for Disclosure The Parties may only use Confidential Information for the following purpose (the “Purpose”): Providing services as described in the Consulting Services Agreement between the Parties.

3. Non-Disclosure of Confidential Information Recipient agrees: (i) to use the same degree of care, but no less than a reasonable degree of care, to protect against the unauthorized disclosure of Discloser’s Confidential Information as it uses to protect its own Confidential Information; (ii) not to divulge any such Confidential Information or any information derived therefrom to any third person; (iii) not to make any use whatsoever at any time of such Confidential Information except as necessary in accordance with the Purpose; (iv) not to copy or reverse engineer any such Confidential Information except in connection with the purpose; and (v) not to export or re-export (within the meaning of U.S. or other export control laws or regulations) any such Confidential Information or product thereof. Recipient agrees to disclose Confidential Information only to its directors, officers, employees, consultants, agents or independent contractors (its “Representatives”) with a direct need to know to effect the Purpose, and who are bound by legally enforceable obligations of confidentiality no less restrictive than the terms of this Agreement. Recipient shall not remove the proprietary notices from Confidential Information. Each Party agrees to promptly notify the other Party in writing of any misuse or misappropriation of Confidential Information of the other Party of which it becomes aware.

4. Mandatory Disclosure In the event that Recipient or its Representatives is requested or required by legal process or applicable regulations or laws to disclose any of the Confidential Information of Discloser, to the extent permitted by law, Recipient shall give prompt notice so that Discloser may seek a protective order or other appropriate relief. If such protective order is not obtained, Recipient shall disclose only that portion of the Confidential Information that its counsel advises that it is legally required to disclose.

5. Remedies Recipient acknowledges and agrees that due to the unique nature of Discloser’s Confidential Information, there may be no adequate remedy at law for any breach of Recipient’s obligations hereunder, which breach may result in irreparable harm to the Discloser and therefore, that upon any such breach of any threat thereof, the Discloser shall be

entitled to seek appropriate equitable relief in addition to whatever remedies it might have at law.

6. Term The foregoing commitments of each Party shall survive any termination of the Purpose, and shall remain in effect with respect to any particular Confidential Information for a period of three (3) years.

7. No Additional Agreements; No Prohibition on Agreements Nothing herein shall obligate either Party to disclose any Confidential Information or negotiate or enter into any agreement or relationship with the other Party. Nothing herein shall prohibit a Party from entering into any arrangement or agreement with a third party.

9. General (a) Assignment: This Agreement is not assignable or transferable by either Party; any attempted assignment will be void and without effect, unless such assignment is agreed to in writing by both Parties. (b) No Other Rights: No rights, title, license of any kind in any Confidential Information is provided hereunder, either expressly or by implication, estoppel or otherwise. (c) No Agency: This Agreement does not create any agency or partnership relationship. (d) No Waiver: No waiver of any provision of this Agreement, or a breach of this Agreement shall be effective unless it is in writing, signed by the Party waiving the provision or the breach. No waiver of a breach of this Agreement (whether express or implied) shall constitute a waiver of a subsequent breach of this Agreement. (e) Choice of Law: This Agreement will be governed by and interpreted in accordance with the laws of the State of New Hampshire, excluding its choice of laws rules. (f) Complete Agreement: This Agreement constitutes the complete agreement between the Parties on the subject matter identified herein.

Any modifications to this Agreement must be made in writing and signed by both Parties.

NORTHERN UTILITIES, INC.

By: Robert B. Hevert

Robert B. Hevert

NAME (PRINT OR TYPE)

TITLE: Sr. Vice President

Date: June 10, 2021

FTI CONSULTING, INC.

By: Matthew DeCoursey

Matthew DeCoursey

NAME (PRINT OR TYPE)

TITLE: Managing Director

Date: June 11, 2021



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ScottMadden, Inc.
1900 West Park Drive
Suite 250
Westborough, MA 01581
508-202-7918
scottmadden.com

May 3, 2021

Privileged and Confidential

Ms. Karen Asbury
Director of Regulatory Services
Unitil Energy Systems
6 Liberty Lane West
Hampton, NH 03842-1720

RE: RFP No. USC-42021 (NU NH Division)

Dear Ms. Asbury:

ScottMadden, Inc. ("ScottMadden") is pleased to provide this proposal to Northern Utilities, Inc. NH Division d/b/a Unitil ("Unitil" or the "Company") in response to its request for proposal ("RFP") USC-42021. We understand the Company seeks expert assistance in preparing studies for its natural gas base rate case filing before the New Hampshire Public Utilities Commission (the "Commission") on or by July 30, 2021. We further understand the Company seeks expert assistance in four areas; our proposal addresses the following three areas: (1) Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization; (2) Revenue Decoupling; and (3) Return on Equity ("ROE").¹

We believe ScottMadden is highly qualified and well positioned to provide the requested expert assistance in the identified three areas in a thorough, efficient, and cost-effective manner. Our partners, staff and executive advisors have significant experience in sponsoring studies and testimony in rate case proceedings for gas, electric, and water utilities throughout North America. Our experience includes: (1) preparation of pre-filed testimony, supported by research and analysis; (2) preparation of responses to discovery requests; (3) review of Commission staff and other intervenor testimony; (4) participation in technical sessions; (5) live testimony at evidentiary hearings; (6) assistance with cross-examination of other witnesses; (7) assistance with preparation of briefs and presentations to the Commission; and (8) participation in settlement conferences/discussions.

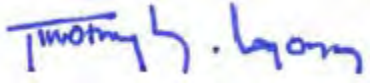
Specific to this proposal, ScottMadden has sponsored testimony in the three areas on behalf of electric, gas and water utilities throughout the country. Most recently, we sponsored testimony on behalf of the Company in New Hampshire and Maine related to a proposed decoupling mechanism in Docket No. DE 21-030, capital investment cost recovery mechanism in Docket No. 2019-00092 and the Targeted Area Buildout (TAB) program in Docket No. 2015-00146. ScottMadden also sponsored testimony on behalf of the Company in Massachusetts related to ROE in Docket Nos. 19-130 and 19-131.

¹ ScottMadden does not propose to assist the Company in the fourth area: 2.4 Depreciation Study.

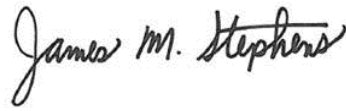
Ms. Karen Asbury
May 3, 2021
Page 2

We appreciate the opportunity to submit this proposal. Tim Lyons, Partner, will be ScottMadden's primary contact person for the RFP process and serve as Project Manager for the proposed engagement. Please feel free to contact Tim at any time should you have questions.

Sincerely,



Timothy S. Lyons
Partner
Email: tlyons@scottmadden.com
802.497.0761



James M. Stephens
Partner and Rates & Regulation
Practice Leader

Northern Utilities, Inc. – NH Division d/b/a Unitil

Rate Case Studies
Request for Proposal No. USC-42021

May 3, 2021



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000362



Executive Summary 2

ScottMadden Knows Energy 2

Scope of Work 4

2.1 Allocated Cost of Service Study, Marginal Cost Study, Rate Design and Weather, Sales and Revenue Normalization 4

2.2 Revenue Decoupling 11

2.3 Return on Equity 14

Proposed Commercial Terms 17

Attachment A – Project Team Resumes and Testimony Listings 20

Attachment B – References 35



EXECUTIVE SUMMARY

ScottMadden, Inc. (“ScottMadden”) is pleased to provide this proposal to Unitil Energy Systems, Inc. d/b/a Unitil (“Unitil” or the “Company”) in response to its request for proposal (“RFP”) USC-42021 to provide expert assistance in preparing several studies for its natural gas base rate case filing. We understand the Company currently intends to present this filing to the New Hampshire Utilities Commission (“Commission”) on or about July 30, 2021. ScottMadden also understands that according to the Scope of Proposed Work, the Company seeks assistance in four areas; our proposal addresses the following three areas:

- 2.1 Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization;
- 2.2 Revenue Decoupling; and
- 2.3 Return on Equity.



SCOTTMADDEN KNOWS ENERGY

Since 1983, we have served more than 475 electric and gas utility clients, including the 20 largest energy utilities. We have performed more than 3,300 projects across every energy utility business unit and every function. We have helped our clients develop business and regulatory strategies, improve operations, reorganize business units, and implement improvement initiatives.

ScottMadden provides broad, deep energy expertise coupled with practical business acumen. We have learned the value of listening carefully to our clients, and we tailor our work to meet your unique needs and produce solutions that ensure you can compete in this ever-changing industry.

We assist clients throughout the entire business management lifecycle: from developing business and regulatory strategies, to translating those strategies into business plans, to implementing the plans through targeted projects, to managing those projects to successful completion, to supporting these plans and projects in regulatory proceedings.

A sample of our utility clients is listed in Figure 1 (below). Please note this is a representative sample and not all-inclusive of our clients due to confidentiality agreements.

Figure 1: Select Utility Clients of ScottMadden

Generation	Transmission	Delivery	Utilities	Regulation	Gas
					
			 		
					
					
			  	 	  

SCOPE OF WORK

Below is our proposed scope of work in three of the four identified areas²:

- 2.1** Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization;
- 2.2** Revenue Decoupling; and
- 2.3** Return on Equity.

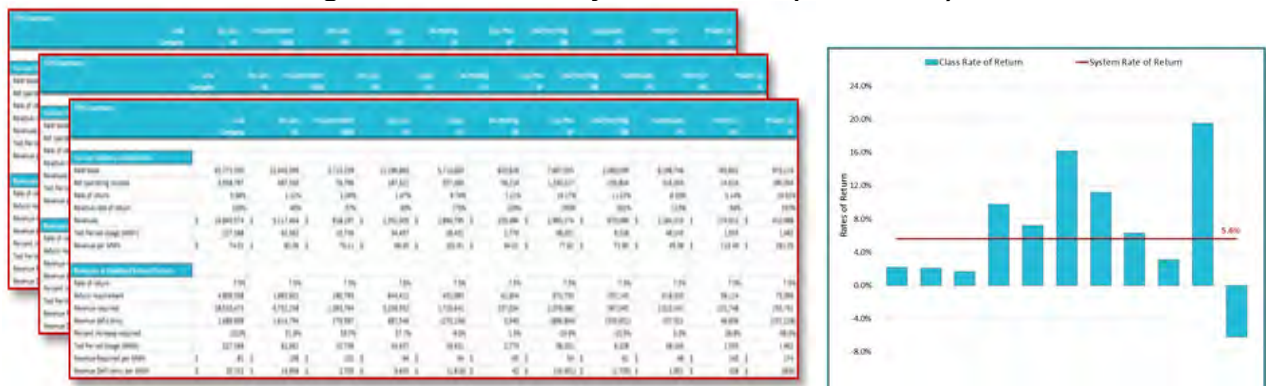
2.1 ALLOCATED COST OF SERVICE STUDY, MARGINAL COST STUDY, RATE DESIGN AND WEATHER, SALES AND REVENUE NORMALIZATION

ScottMadden proposes to provide expert assistance related to the ACSS, MCS, Rate Design and Weather, Sales and Revenue Normalization. This section describes our proposed scope of work related to these studies, including: (1) development of the Company's objectives, (2) data collection and analysis, (3) preparation of the Weather, Sales and Revenue Normalization; (4) preparation of the ACSS and MCS, (5) preparation of proposed rate design, and (6) preparation of testimony.

The ACSS and MCS studies will be prepared utilizing user-friendly and dynamic spreadsheet models that employ industry standard cost allocation methodologies while facilitating 'what-if' analysis and rate design scenarios, as illustrated in Figure 2 (below). Key features include:

- Easy to follow input-calculations-output model structure;
- Easy to update inputs, since the cost allocation, rate design and bill impact calculations are incorporated into a single spreadsheet; and
- Easy to view results, including class returns, unit cost comparisons and bill impact comparisons.

Figure 2: ACSS Study and Results (Illustrative)



² ScottMadden does not intend to submit a proposal related to the fourth area: 2.4 Depreciation Study.

Specific tasks are described below.

Task 1: Kickoff Meeting

The purpose of this task is to begin the planning and administration of the studies – as well as develop a better understanding the Company’s rate case requirements and objectives. We plan to accomplish this task by holding a kickoff meeting with the Company’s rate case team. Specific activities include:

- Discuss the Commission’s most recent decisions and their potential impact on the ACSS, MCS, rate design and weather, sales, and revenue normalization
- Discuss cost of service and rate design objectives
 - What concerns or issues were raised in the Company’s most recent order? How should they be addressed in the current study?
 - What are the Company’s strategic rate initiatives?
- Prepare research and analysis to support rate case positions
- Collect data
 - Recent studies, workpapers and models;
 - Test year operating revenues and expenses, gross and net plant;
 - Customer and usage data by customer class; and
 - Current rates and tariffs.
- Discuss work plan, schedule and data requests
 - Finalize the work plan and schedule following the kickoff meeting.

Task 2: Review Past ACSS, MCS and Weather, Sales and Revenue Normalization

The purpose of this task is to better understand the historical context and past practices for the rate case filing. This will be accomplished through review of various documents. Specific activities include:

- Review recent ACSS, MCS, rate design and weather, sales and revenue normalization performed by
 - The Company; and
 - Other New Hampshire natural gas utilities.
- Review current rates and tariffs
 - Identify concerns with the current rates and potential changes.
- Summarize review
 - Identify issues that would inform changes in the ACSS, MCS, rate design and weather, sales and revenue normalization.

Task 3: Prepare Weather, Sales and Revenue Normalization

The purpose of this task is to prepare the weather, sales and revenue normalization rate class. The Company will be responsible for providing test year customer and sales data by billing cycle and rate class, peak day and design day sendout and weather data for the system. These data form the basis for the class demand requirements, which are used to develop the cost drivers for the ACSS. Specific activities include:

- Review of customer counts, and usage data by rate class, and prepare a comparison to the most recent cost of service study;
- Review of service characteristics, such as load factor, between customers and customer classes to evaluate relative cost drivers;
- Develop normalized sales and revenues by adjusting actual sales for the difference between normal and actual degree days. As appropriate, adjust actual sales for any differences between actual and normal billing days; and
- Discuss composition of existing customer classes, and whether the Company wishes to consider any new classes or consolidate existing classes.

Task 4: Collect Data for ACSS

The purpose of this task is to review and evaluate test year data to be used in the ACSS. The Company will be responsible for providing accounting and financial data for the test year. In addition, the Company will be responsible for providing test year customers, sales and revenues by rate class.

It is important at this time to consider changes to current rate classes, as the customer, sales and peak demand data will form the basis for any new or changes in the current rate classes. Specific activities include:

- Collect test year accounting and financial data
 - How updated data drives changes in the ACSS?
- Collect and evaluate test year customer, sales, revenues and peak demands
 - How updated data drives changes in the ACSS?
- Consider any new or changes to current rate classes
- Summarize review
 - Identify key changes in the ACSS, such as new or redefined rate classes.

Task 5: Prepare ACSS

The purpose of this task is to develop the ACSS. ScottMadden will prepare the ACSS consistent with the Company's objectives, while ensuring consistency with regulatory precedent and past Commission decisions, cost-causation principles and industry practice. Specific activities include:

- Reconcile ACSS to the revenue requirements, ensuring all costs and revenues are accurately reflected
- Follow longstanding industry practice of assigning costs to each rate class based on three steps:
 - Functionalization: cost assignment into the functional categories of production, storage, transmission, and distribution that will form the basis for the distribution service revenue requirements;
 - Classification: cost assignment into customer, peak demand, and usage categories that will form the basis for the rate design elements, particularly customer charges; and
 - Allocation: cost assignment to customer classes consistent with the functionalization and classification steps described above and based on allocation methodologies that are consistent with past Commission precedent, past practices, and generally accepted ratemaking approaches.
- Prepare ACSS consistent with:
 - The Company's ACSS and rate design objectives, while ensuring consistency with regulatory precedent and past Commission decisions, cost-causation principles, and industry practice.
- Prepare ACSS that determines the cost of service by:
 - Customer class;
 - Cost categories (*i.e.*, customer, demand, energy); and
 - Functional categories (*i.e.*, production, T&D).
- Summarize ACSS results
 - Compare with prior studies; and
 - Evaluate alternative allocation methods, as applicable.

Task 6: Prepare MCS

The purpose of this task is to develop the MCS. ScottMadden will prepare the MCS consistent with the Company's objectives, while ensuring consistency with regulatory precedent and past Commission decisions, cost-causation principles and industry practice.

The MCS will inform the rate design by providing an estimated cost of serving an additional customer or providing an additional unit of service. The estimated costs are used to inform the rate design in establishing efficient price signals.

The Company will be responsible for providing historical data for the study, including historical plant investments and O&M expenses. Specific activities include:

- Collect MCS data
- Prepare MCS consistent with
 - The Company's MCS and rate design objectives, while ensuring consistency with regulatory precedent and past Commission decisions, cost-causation principles, and industry practice.

- Prepare MCS that determines incremental costs by:
 - Production costs;
 - Customer-related costs;
 - Transmission and distribution-related costs; and
 - Customer class for each function listed above.
- Summarize MCS results:
 - Compare with prior studies; and
 - Evaluate impact on rate design.

Task 7: Prepare Rate Design

The purpose of this task is to develop the proposed rate design. We plan to accomplish this task by first summarizing the rate design objectives and requirements identified in Task 1. In addition, the proposed rate design will recover the proposed revenue requirements in a manner that reflects fair and equitable rates while addressing rate continuity concerns. Specific activities include:

- Review past rate designs
 - Review recently approved rate designs of the Company and other New Hampshire utilities;
 - We note in Eversource Energy in Docket No. DE 19-057 (Settlement Agreement, but not yet approved by the Commission) – Eversource agreed to phase out of declining block rates for all rate classes where such rates exist (Settlement at 30); and
 - Identify concerns related to the current rate structure, rates and tariffs, and potential changes to them.
- Prepare rate design
 - Develop rates consistent with design principles outlined by the Commission;
 - "If we viewed rate design as a house, the important aspects of equity, continuity, simplicity, understandability, and revenue stability are the attributes that make the house livable..." Commission Order 20,504 at 285 (June 8, 1992)
 - Develop a rate design model that utilizes the results of the ACSS and MCS studies to recover the revenue requirements;
 - Work with the Company to utilize the results of the ACSS and MCS studies and its rate design objectives to design rates consistent with the Company's rate design objectives and industry practices, including: (a) to recover the overall revenue requirements; (b) to establish fair and equitable rates; and (c) to moderate rate changes to address rate continuity concerns; and
 - Prepare a comparison of proposed and current rates.

Task 8: Prepare Bill Impact Studies

The purpose of this task is to evaluate the customer bill impact of the proposed rates relative to current rates over a wide distribution of customer usage within each rate class. Specific activities include:

- Develop a frequency distribution of monthly/ annual use across the rate classes. This will enable the Company to consider the impact of alternative rate design proposals over a wide range of customers within a given rate class. Such analysis is important to evaluate substantial changes in rate design, such as large increases in the customer charges; and
- Develop a bill impact model that compares proposed and current rates, with and without the impact of the cost of gas adjustment and other charges.

Task 9: Prepare Testimony on ACSS, MCS, Rate Design and Weather, Sales and Revenue Normalization

The purpose of this task is to prepare testimony that supports the ACSS, MCS, rate design and weather, sales and revenue normalization proposals. The testimony will include: (1) an overview of the proposals and their theoretical and practical foundations; (2) a description of the methodology to prepare the ACSS and MCS, including compliance with past Commission decisions and past practices and consistency with the Company's cost of service and rate design objectives; (3) proposed revenue targets for each customer class; and (4) a proposed rate design that recovers each class' revenue target. Specific activities related to this task include:

- Describe methodology and data used to prepare the ACSS, MCS, rate design and weather, sales and revenue normalization proposals;
- Describe the results and impact on the rate classes;
- Develop schedules and workpapers supporting the weather, sales and revenue normalization;
- Develop schedules and workpapers supporting the ACSS and MCS results; and
- Develop schedules and workpapers supporting the proposed rate design.

Task 10: Provide Post-filing Regulatory Support

The purpose of this task is to provide on-going support during the period following the filing until a Commission decision has been issued. Such support would include: preparation of responses to discovery requests; review and analysis of testimony of other parties; preparation of rebuttal testimony and other testimony; attendance at technical sessions, settlement meetings and hearings; supporting the Company's staff in negotiations and/or litigation; and support/review compliance with the Commission's decision, as needed.

Our workpapers also include all cited documents, and all data and calculations supporting charts and tables included in the testimony.

PROJECT TEAM

We propose Timothy S. Lyons, Partner, sponsor the ACSS, rate design and weather, sales and revenue normalization testimony in this proceeding. Mr. Lyons is an experienced consultant with more than 30 years of operating and consulting experience in the energy industry. He has sponsored testimony, including weather normalization, cost of service and rate design, in 20 jurisdictions, including New Hampshire, Vermont, Maine, Massachusetts, Connecticut and Rhode Island. In addition, Mr. Lyons has sponsored testimony on behalf of the Company in New Hampshire and Maine related to the proposed decoupling mechanism in Docket No. DE 21-030, Targeted Area Buildout (TAB) program in Docket No. 2015-00146 and co-sponsored testimony related to a proposed capital investment cost recovery mechanism in Docket No. 2019-00092.

We also propose that Mr. Lyons and Talha Sheikh, Manager, co-sponsor the MCS testimony in this proceeding. Mr. Sheikh is an experienced consultant with more than five years of consulting experience in the utility industry, assisting in more than 15 studies related to rate design, class cost of service, alternative rate mechanisms, and cash working capital ("CWC") / lead-lag studies in seven regulatory jurisdictions.

The project team will include other ScottMadden consultants as needed.

Messrs. Lyons' and Sheikh's resumes are included in Attachment A. Additional project team resumes are available upon request.



2.2 REVENUE DECOUPLING

As discussed below, ScottMadden proposes to assist the Company in all tasks related to a proposed revenue decoupling mechanism. Preparation of the proposed revenue decoupling mechanism consists of the following tasks.

Task 1: Kickoff Meeting

The purpose of this step is to better understand the Company's requirements related to a revenue decoupling mechanism. We plan to accomplish this task by holding a kickoff meeting with the Company's rate case team. Specific activities include:

- Summarize the Company's objectives and requirements
 - Discuss important financial drivers – declining use per customer, energy efficiency, conservation; and
 - Review historical data to better understand financial drivers, such as sales and revenues changes overtime.

Task 2: Summarize New Hampshire and Industry Research and Analysis

- Review recently approved revenue decoupling mechanisms
 - Liberty Utilities/ Granite State Electric in Docket No. 19-064 (Order approving Settlement Agreement) – the Settlement expands Liberty Utilities' revenue decoupling mechanism from a Lost Revenue Adjustment Mechanism ("LRAM") to a full Revenue Decoupling Mechanism ("RDM") concurrent with its step rate increase in 2021. The full RDM provides for a reconciliation between authorized and actual monthly delivery revenues per customer, as shown in Figure 5 (below). A key feature of Liberty Utilities' RDM is that it provides for adjustments across residential and commercial rate classes; and
 - Liberty Utilities/ EnergyNorth in Docket No. 17-048 – the order approves Liberty Utilities' revenue decoupling mechanism including the real-time weather adjustment.
- Summarize industry research for revenue decoupling mechanism, such as ACEEE's study on the relationship between high performing energy efficiency programs and decoupling³
- Summarize key benefits associated with revenue decoupling mechanisms
 - Mitigates financial disincentives for encouraging energy conservation and efficiency initiatives;
 - Provides revenue stability in case of declining natural gas usage;
 - Provides more efficient regulation through reduction in frequency of rate cases;

³ <https://www.aceee.org/toolkit/2020/02/aligning-utility-business-models-energy-efficiency>

- Promotes rate design flexibility (e.g., lower customer charges); and
- Produces more stability in customer bills during periods of high usage.

Task 3: Evaluate Decoupling Options

The purpose of this step is to evaluate decoupling options that achieve the Company's needs and objectives. Specific activities include:

- Review decoupling options:
 - Monthly revenue decoupling by rate class, similar to the Company's proposal in its ongoing rate case proceeding in 21-030; and
 - Monthly revenue decoupling by customers; i.e., "real-time", similar to Liberty Utilities.
- Evaluate decoupling options – key evaluation criteria include:
 - The Company's objectives;
 - Ease of implementation;
 - Symmetry regarding customer benefits and bill impacts; and
 - Support from industry experience and literature.
- Develop models to simulate decoupling mechanism implementation. Evaluate impact on customer bills and the Company's revenue recovery during various scenarios:
 - Customer growth;
 - Changes in use per customer; and
 - Changes in rate design.

Task 4: Develop Supporting Testimony and Workpapers

The purpose of this step is to prepare testimony supporting the revenue decoupling proposal. The testimony will include: (1) an overview of decoupling mechanisms and recent developments; (2) the Company's need for decoupling and the proposal's theoretical and practical foundations; and (3) proposed decoupling mechanism and implementation specifics.

The step would achieve the following key objectives:

- Establish the importance of revenue decoupling in the changing utility landscape
- Establish support for the Company's decoupling mechanism
- Present the Company's proposed decoupling mechanisms with specifics on implementation, including:
 - Proposed rate classes included in the mechanism;
 - Calculation of true-up adjustment to benchmarked revenues;
 - Frequency and timing of adjustments;

- Implementation examples in different scenarios; and
- Proposed adjustment cap (if any).

■ Present the Company's proposed tariff to implement the revenue decoupling mechanism

Our workpapers will include all cited documents and all data and calculations supporting the decoupling mechanism, as well as charts and tables included in the testimony.

PROJECT TEAM

We propose Timothy S. Lyons, Partner, sponsor the revenue decoupling testimony in this proceeding. Mr. Lyons is an experienced consultant with more than 30 years of operating and consulting experience in the energy industry. He has sponsored testimony, including revenue decoupling, in 20 jurisdictions, including New Hampshire, Vermont, Maine, Massachusetts, Connecticut and Rhode Island. In addition, Mr. Lyons co-sponsored testimony on behalf of the Company in New Hampshire and Maine related to a proposed revenue decoupling mechanism in Docket No. DE 21-030, capital investment cost recovery mechanism in Docket No. 2019-00092 and sponsored testimony related to the Targeted Area Buildout (TAB) program in Docket No. 2015-00146.

Mr. Lyons will be assisted by Talha Sheikh, Manager. Mr. Sheikh is an experienced consultant with more than five years of consulting experience in the utility industry, assisting in over 15 studies related to rate design, class cost of service, alternative rate mechanisms, and CWC/ lead-lag studies in seven regulatory jurisdictions. The project team will be assisted by other ScottMadden consultants as needed.

Messrs. Lyons' and Sheikh's resumes are included in Attachment A.



2.3 RETURN ON EQUITY

Calculation of Cost of Common Equity, Including Direct Testimony

With respect to the development of ROE testimony, we begin with a review of: (1) prior rate decisions and testimony regarding the cost of equity; (2) Company-specific business issues (including review of Securities and Exchange Commission disclosure documents, investor presentations, and analyst reports, if available or relevant); (3) rating agency reports; and (4) other relevant material. Based on our understanding of the Company's current situation, and our review of current and expected capital market conditions, we will develop an outline of the testimony. That outline will serve as the basis for our draft testimony and analyses.

The first step in our analysis is the selection of appropriate proxy companies. In general, we tend to rely on *Value Line Investment Services* universe of utility companies and apply a series of screening criteria to ensure the eventual proxy group is fundamentally comparable to the subject company.

ScottMadden typically uses several methodologies to support our analyses. As described in more detail below, those approaches have included, as appropriate, the Discounted Cash Flow ("DCF") model, Capital Asset Pricing Model ("CAPM"), Risk Premium Model ("RPM"), and the Comparable Earnings Model ("CEM"). ScottMadden reviews prior testimony and orders and works with the Company to establish the appropriate approach to developing our analyses and supporting testimony. As part of the testimony, we produce workpapers including all cited documents, and all data and calculations supporting charts, tables, and references.

Discounted Cash Flow Model

Our approach has been to rely on earnings growth rates in the DCF model. We look to consensus growth rate estimates from services such as Bloomberg, Zacks, and First Call, as well as Value Line for that data. In prior proceedings, the selection of the appropriate growth rate has been the subject of some disagreement. We recognize that the opposing parties may suggest that analysts' forecasts may be biased. To that point, ScottMadden has broad experience developing analyses to rebut the opposing party's position that equity analysts generally, and those covering the proxy companies in particular, consistently produce biased growth rate projections.

Capital Asset Pricing Model

We believe the CAPM has several attributes that not only are useful in calculating the Cost of Equity, but also provide important context regarding prevailing and expected market conditions. Our convention is to use a 30-year Treasury yield as the Risk-Free Rate component – utility equity represents a long-duration investment that is best matched with the longest-duration Treasury security. As to the Market Risk Premium, our convention is to calculate expected market returns and subtract a 30-year Treasury yield from those expected market returns to arrive at the expected Market Risk Premium. Lastly, we rely on Beta coefficients from Value Line and Bloomberg, which calculate the coefficients over five and two years, respectively.

Risk Premium Model

The RPM estimates the cost of equity, more generally than the CAPM, based on an expected Equity Risk Premium applied to an expected bond yield. The RPM recognizes that common equity capital has greater investment risk than debt capital. According to RPM theory, the Equity Risk Premium over bonds is estimated historically or prospectively with that premium used to determine the cost of equity. In prior cases we have used Treasury yields, the Moody's Baa (or A) utility bond yield, or some combination of those yields as the relevant measure of interest rates.

Comparable Earnings Model

The CEM is based upon the "comparable risk" standard in *Hope* and *Bluefield*, which mandates that the authorized rate of return on common equity for a utility company must be commensurate with enterprises with similar risk. We select our non-utility proxy group by screening non-utility companies through ranges of unadjusted beta (systematic risk) and the residual standard error of the regression (unsystematic risk) of the proxy group. We use these two screens because systematic risk plus unsystematic risk equals total risk, and if a non-utility company can pass both screens, it theoretically has similar total risk to the average proxy group company. Once we determine the non-utility proxy group, we apply the DCF, CAPM, and RPM to those companies to arrive at an indicated common equity cost rate.

Preparation of Responses to Information Requests

Although the breadth and scope of information requests may vary for each case, ScottMadden will prepare all responses in a timely manner and provide draft responses in advance to enable the Company an opportunity to review as needed. In an effort to reduce the volume of information requests, and to make information readily available to all parties in the proceeding, ScottMadden will make all workpapers, source documents, and cited materials available at the time the testimonies are filed.

Preparation of Rebuttal Testimony

We believe our experience providing testimonies in rate proceedings and in rebutting multiple witnesses has provided us a substantial advantage anticipating the disputed issues in the context of the proceedings. As a result, our familiarity with the issues will enable ScottMadden to develop our analyses and testimony in a very efficient and cost-effective manner. As to the testimony itself, ScottMadden will provide drafts and rounds of review with the Company.

Evidentiary Hearing Attendance

ScottMadden has significant experience providing live testimony before regulatory commissions, arbitration boards, and state Superior Courts. This experience will benefit the Company during the hearing phase of the proceeding.

Assist with Initial and Reply Briefs on the Cost of Equity Study

ScottMadden will provide support as needed in the preparation of briefs as they relate to the cost of equity study.

PROJECT TEAM

We propose Dylan W. D'Ascendis, CRRA, CVA, Director, sponsor the return on equity testimony in this proceeding. Mr. D'Ascendis has provided testimony in over 80 regulatory proceedings before 30 regulatory bodies, including the New Hampshire Public Utilities Commission. Mr. D'Ascendis has regulatory experience with Unitil affiliates and other New Hampshire utilities. Mr. D'Ascendis has provided cost of capital testimony for Fitchburg Gas and Electric Light Company (DPU 19-130 (electric) and DPU 19-131 (gas)) and Aquarion Water Company New Hampshire (Docket No. DW-20-184).

Mr. D'Ascendis will be supported by other ScottMadden consultants, as needed. Mr. D'Ascendis' resume and testimony listing are included in Attachment A to this proposal.

PROJECT SCHEDULE

ScottMadden understands the Company currently intends to present their rate case filing to the Commission on or about July 30, 2021. Based on this filing date, and a bid award date of May 6, 2021, we propose the following schedule for preparing Pre-Filed Direct Testimony:

Date	Tasks for Pre-Filed Direct Testimony
██████████	■ Outline of Pre-Filed Direct Testimony
██████████	■ First draft of Pre-Filed Direct Testimony with our analytical results
██████████	■ Final draft of Pre-Filed Direct Testimony with supporting schedules and workpapers
██████████	■ Company files rate case application



PROPOSED COMMERCIAL TERMS

As to commercial terms, we propose to bill for our services on a time and materials basis, based on the hourly rates set forth in Table 1 (below). We also would bill for our reasonable direct expenses, as incurred, with no additional mark-up. ScottMadden's normal practice is to invoice monthly for professional fees and travel expenses, and support costs. Given our proximity to the Company's offices and the Commission, we expect our travel costs to be minimal. Please refer to ScottMadden's Project Price Sheets for more details.

Table 1: Hourly Billing Rates

Position	Hourly Rate
Partner	
Director	
Manager	
Senior Associate	
Associate	
Senior Analyst	
Analyst	
Administrative Assistant	

2.1 Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization

For the purpose of direct testimony, we propose a budget not to exceed [REDACTED]. Regarding the preparation of rebuttal testimony, responding to discovery, hearing preparation and attendance, and post-hearing assistance, we would bill for our services on a time and materials basis at the rates provided in Table 1. Based on our understanding of the potential scope of discovery and rebuttal testimony, we estimate our fee for the entirety of the proceeding (including direct testimony, discovery, rebuttal testimony, hearing preparation and attendance, and assistance in the post-hearing briefing process) will be approximately [REDACTED]. Please refer to Table 2 (below), and ScottMadden's Project Price Sheet, NUNH RFP Attachment 1 for more details.

Table 2: ACSS, MCS, Rate Design and Weather Sales and Revenue Normalization Budget

ACSS, MCS, Rate Design and Normalization	Pre-Filed Direct Testimony	Discovery	Rebuttal Testimony	Hearing and Post-Hearing Support	Total
Total Cost					
Total Hours					
Blended Rate					

2.2 Revenue Decoupling

For the purpose of direct testimony, we propose a budget not to exceed [REDACTED]. Regarding the preparation of rebuttal testimony, responding to discovery, hearing preparation and attendance, and post-hearing assistance, we would bill for our services on a time and materials basis at the rates provided in Table 1. Based on our understanding of the potential scope of discovery and rebuttal testimony, we estimate our fee for the entirety of the proceeding (including direct testimony, discovery, rebuttal testimony, hearing preparation and attendance, and assistance in the post-hearing briefing process) will be approximately [REDACTED]. Please see Table 3, below, and ScottMadden's Project Price Sheet, NUNH RFP Attachment 2 for more details.

Table 3: Revenue Decoupling Budget

Decoupling	Pre-Filed Direct Testimony	Discovery	Rebuttal Testimony	Hearing and Post-Hearing Support	Total
Total Cost	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Hours	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Blended Rate	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

2.3 Return on Equity

For the purpose of direct testimony, we propose a budget not to exceed [REDACTED]. Regarding the preparation of rebuttal testimony, responding to discovery, hearing preparation and attendance, and post-hearing assistance, we would bill for our services on a time and materials basis at the rates provided in Table 1. Based on our understanding of the potential scope of discovery and rebuttal testimony, we estimate our fee for the entirety of the proceeding (including direct testimony, discovery, rebuttal testimony, hearing preparation and attendance, and assistance in the post-hearing briefing process) will be approximately [REDACTED]. Please see Table 4, below, and ScottMadden's Project Price Sheet, NUNH RFP Attachment 3 for the pricing details.

Table 4: Return on Equity Budget

	Direct Testimony	Discovery	Rebuttal Testimony	Hearing and Post-Hearing Assistance	Total
Total Cost	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Hours	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Blended Rate	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

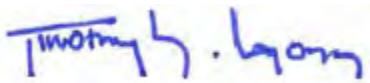
Please note our proposed fees may change, depending on the scope and nature of discovery and opposing testimony. We will notify you promptly if we believe that the actual cost will exceed our budgeted total amount.

This proposal is a firm offer for a period of not less than 90 days from the deadline for proposals. ScottMadden has reviewed our current project commitments and to the best of our knowledge certifies there is no conflict of interest with respect to the services outlined herein, nor will this engagement create any conflict of interest.

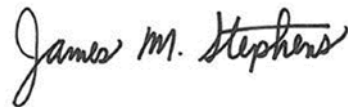
Thank you again for your time and consideration. As always, please do not hesitate to call us with any questions you may have. Mr. Lyons may be reached at 802.497.0761 at your convenience or via email at tlyons@scottmadden.com.

We look forward to discussing this proposal with you.

Kind regards,



Timothy S. Lyons
Partner



James M. Stephens
Partner and Rates & Regulation
Practice Leader



ATTACHMENT A – PROJECT TEAM RESUMES AND TESTIMONY LISTINGS

Summary

Tim Lyons is a partner with ScottMadden with more than 30 years of experience in the energy industry. He has held senior positions at several gas utilities and energy consulting firms. Mr. Lyons experience includes rate and regulatory support, sales and marketing, customer service and strategy development. Prior to joining ScottMadden, he was Vice President of Sales and Marketing for Vermont Gas. Mr. Lyons has also served as Vice President of Marketing and Regulatory Affairs for Providence Gas Company (now, National Grid), Director of Rates at Boston Gas Company, and Project Director at Quantec, LLC, an energy consulting firm. Mr. Lyons has sponsored testimony before 20 state regulatory commissions. He holds a B.A. from St. Anselm College, an M.A. in Economics from The Pennsylvania State University, and an M.B.A. from Babson College.

Areas of Specialization

- Regulation and Rates
- Retail Energy
- Utilities
- Natural Gas

Capabilities

- Regulatory Strategy and Rate Case Support
- Strategic and Business Planning
- Capital Project Planning
- Process Improvements

Articles and Speeches

- "Country Strong: Vermont Gas shares its comprehensive effort to expand natural gas service into rural communities." **American Gas Association**, June 2011 (with Don Gilbert).
- "Talking Safety With Vermont Gas." **American Gas Association**, February 2009 (with Dave Attig).
- "Consumers Say 'Act Now' To Stabilize Prices." **Power & Gas Marketing**, September/ October 2001 (with Jim DeMetro and Gerry Yurkevicz).
- "Rate Reclassification: Who Buys What and When." **Public Utilities Fortnightly**, October 15, 1991 (with John Martin).

Recent Assignments

- Prepared a market analysis for a utility to evaluate natural gas expansion into new areas, including: (a) survey of homes and businesses; (b) estimate of construction and operating costs; (c) analysis of alternative supply options (including pipeline, LNG and CNG); and (d) financial modeling.
- Directed a process review of natural gas expansion projects for a gas utility. The assignment included a review, evaluation and recommendations related to: (a) policies and procedures; (b) process steps and personnel; (c) financial models and analysis; (d) project decisions and schedules; and (e) post-construction review and evaluation.
- Led a study for the Massachusetts Department of Energy Resources to evaluate the benefits, costs and policies options associated with natural gas expansion by Massachusetts gas utilities. The study included: (a) research on state regulatory policies; (b) financial modeling and analysis of the economic and environmental impacts of pursuing various policy options; and (c) a survey of Massachusetts homeowners on their opinion of home heating fuels.
- Led studies to evaluate "Lost and Unaccounted For Gas" for two gas utilities. The studies included analysis of physical losses, retail meter variations, and gate station meter variations.
- Developed an electric portfolio of cost of service, rate design, and rate planning tools. The tools were used to evaluate the impact of future rate filings and resource portfolio decisions on individual rate classes.
- Prepared a transmission and distribution (T&D) avoided cost study and report for a Midwest electric utility. The study was used to support the utility's energy efficiency programs.
- Sponsored cost of service/rate design testimony for a Mid-Atlantic gas utility. Testimony included a proposal for new residential and commercial rate classes and introduction of a block break rate design.
- Sponsored cost of service/rate design testimony for a Midwest gas utility. Testimony included a proposal for new commercial rate classes and a revenue decoupling mechanism.
- Sponsored cost of service/ rate design and lead-lag testimony for a Midwest gas utility. The testimony included proposals for Revenue Decoupling/ Weather Normalization Mechanism and Tracker Accounts for certain O&M expenses and capital costs.
- Sponsored rate design testimony for a Northeast gas utility. The testimony included: a proposal for zonal rates to promote expansion of natural gas service in the state; market analysis; and financial modeling.
- Prepared a review and evaluation of cost of service/ rate design studies for an electric utility. The assignment included review of proposed rate designs that address cost shifting concerns with serving residential distribution generation customers through introduction of higher customer charges, a demand charge and time-of-use energy charges.
- Sponsored lead-lag testimony for several electric and gas utilities.

Sponsor	Date	Docket No.	Subject
Regulatory Commission of Alaska			
ENSTAR Natural Gas Company	06/16	Docket No. U-16-066	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.
Arkansas Public Service Commission			
Liberty Utilities (Pine Bluff Water)	10/18	Docket No. 18-027-U	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding.
California Public Utilities Commission			
Southwest Gas Corporation (Southern California, Northern California and South Lake Tahoe jurisdictions)	8/19	Docket No. A.19-08-015	Sponsored testimony on behalf of three separate rate jurisdictions related to: revenue requirements, lead-lag/ cash working capital, and class cost of service, rate design and bill impact analysis for a general rate case proceeding.
Connecticut Public Utilities Regulatory Authority			
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.
Illinois Commerce Commission			
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.
Iowa Utilities Board			
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.
Kansas Corporation Commission			
The Empire District Electric Company	12/18	Docket No. 19-EPDE-223-RTS	Sponsored testimony supporting cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
Maine Public Utilities Commission			
Northern Utilities, Inc. d/b/a Unitil	06/19	Docket No. 2019-00092	Sponsored testimony supporting a proposed capital investment cost recovery mechanism.
Northern Utilities, Inc. d/b/a Unitil	06/15	Docket No. 2015-00146	Sponsored testimony supporting the proposed gas expansion program, including a zone area surcharge.
Maryland Public Service Commission			
Sandpiper Energy, a Chesapeake Utilities company	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.
Massachusetts Department of Public Utilities			
Liberty Utilities (New England Gas Company)	08/20	Docket No. DPU 20-92	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2020/2021 through 2024/2025.
Liberty Utilities (New England Gas Company)	07/18	Docket No. DPU 18-68	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2018/2019 through 2022/2023.
Liberty Utilities (New England Gas Company)	07/16	Docket No. DPU 16-109	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2016/2017 through 2020/2021.
Boston Gas	10/93	Docket No. DPU 92-230	Sponsored testimony describing the Company's position regarding rate treatment of vehicular natural gas investments and expenses.

Sponsor	Date	Docket No.	Subject
Boston Gas	03/90	Docket No. 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	03/88	Docket No. DPU 88-67-II	Sponsored testimony supporting the rate reclassification of commercial and industrial customers for a rate design proceeding.
Michigan Public Service Commission			
Lansing Board of Water & Light and Michigan State University	04/20	Docket No. U-20650	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Lansing Board of Water & Light and Michigan State University	04/19	Docket No. U-20322	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Midland Cogeneration Ventures, LLC	09/18	Docket No. U-18010	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Missouri Public Service Commission			
Spire Missouri, Inc.	12/20	Docket No. GR-2021-0108	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
The Empire District Electric Company	08/19	Docket No. ER-2019-0374	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a weather normalization mechanism.
Liberty Utilities (Midstates Natural Gas)	09/17	Docket No. GR-2018-0013	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a revenue decoupling/ weather normalization mechanism as well as tracker accounts for certain O&M expenses and capital costs.
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. The testimony included support for a decoupling mechanism.
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. The testimony included support for a decoupling mechanism.
New Hampshire Public Utilities Commission			
Unitil Energy Systems, Inc.	04/21	Docket No. DE 21-030	Sponsored testimony supporting proposed revenue decoupling mechanism and associated tariff.
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	11/17	Docket No. DG 17-198	Sponsored testimony supporting a levelized cost analysis for approval of firm supply and transportation agreements.
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.
Nevada Public Utilities Commission			
Southwest Gas Corporation	02/20	Docket No. 20-02023	Sponsored testimony supporting the class cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
New Jersey Board of Public Utilities			
South Jersey Gas Company	03/20	Docket No. GR20030243	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Elizabethtown Gas Company	04/19	Docket No. GR19040486	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas Company	08/16	Docket No. GR16090826	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.

Sponsor	Date	Docket No.	Subject
Corporation Commission of Oklahoma			
The Empire District Electric Company	03/19	Cause No. PUD 201800133	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
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. The testimony included proposals for alternative ratemaking mechanisms.
Rhode Island Public Utilities Commission			
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	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.
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	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	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	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.
Railroad Commission of Texas			
Texas Gas Service Company – Central Texas and Gulf Coast Service Areas	12/19	GUD No. 10928	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – Beaumont/ East Texas Division	11/19	GUD No. 10920	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Borger/ Skellytown Service Area	08/18	GUD No. 10766	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – North Texas Service Area	06/18	GUD No. 10739	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – South Texas Division	11/17	GUD No. 10669	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.

Sponsor	Date	Docket No.	Subject
Texas Gas Service Company – Rio Grande Valley Service Area	06/17	GUD No. 10656	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.
CenterPoint Energy – Texas Gulf Division	11/16	GUD No. 10567	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Public Utility Commission of Texas			
CenterPoint Energy Houston Electric, LLC	04/19	Docket No. 49421	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Vermont Public Utilities Commission			
Vermont Gas Systems	12/12	Docket No. 7970	Sponsored testimony describing the market served by \$90 million natural gas expansion project to Addison County, VT. Also described the terms and economic benefits of a special contract with International Paper.
Vermont Gas Systems	02/11	Docket No. 7712	Sponsored testimony supporting the market evaluation and analysis for a system expansion and reliability regulatory fund.
Virginia State Corporation Commission			
American Electric Power - Appalachian Power Company	3/20	Case No. PUR-2020-00015	Sponsored testimony supporting the Lead/Lag study for the 2020 triennial review of base rates, terms and conditions.

Summary

Dylan is an experienced consultant and a Certified Rate of Return Analyst (CRRA) and Certified Valuation Analyst (CVA). He has served as a consultant for investor-owned and municipal utilities and authorities for 12 years. Dylan has extensive experience in rate of return analyses, class cost of service, rate design, and valuation for regulated public utilities. He has testified as an expert witness in the subjects of rate of return, cost of service, rate design, and valuation before 30 regulatory commissions in the U.S., one Canadian province, and an American Arbitration Association panel.

He also maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured.

Areas of Specialization

- | | | |
|----------------------------|-----------------------|-------------------|
| ■ Regulation and Rates | ■ Financial Modeling | ■ Rate of Return |
| ■ Utilities | ■ Valuation | ■ Cost of Service |
| ■ Mutual Fund Benchmarking | ■ Regulatory Strategy | ■ Rate Design |
| ■ Capital Market Risk | ■ Rate Case Support | |

Recent Expert Testimony Submission/Apearances

Jurisdiction	Topic
■ Massachusetts Department of Public Utilities	Rate of Return
■ New Jersey Board of Public Utilities	Rate of Return
■ Hawaii Public Utilities Commission	Cost of Service, Rate Design
■ South Carolina Public Service Commission	Return on Common Equity
■ American Arbitration Association	Valuation

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies
- Maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured
- Sponsored valuation testimony for a large municipal water company in front of an American Arbitration Association Board to justify the reasonability of their lease payments to the City
- Co-authored a valuation report on behalf of a large investor-owned utility company in response to a new state regulation which allowed the appraised value of acquired assets into rate base

Recent Publications and Speeches

- Co-Author of: "Decoupling, Risk Impacts and the Cost of Capital", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. The Electricity Journal, March, 2020.
- Co-Author of: "Decoupling Impact and Public Utility Conservation Investment", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. Energy Policy Journal, 130 (2019), 311-319.
- "Establishing Alternative Proxy Groups", before the Society of Utility and Regulatory Financial Analysts: 51st Financial Forum, April 4, 2019, New Orleans, LA.
- "Past is Prologue: Future Test Year", Presentation before the National Association of Water Companies 2017 Southeast Water Infrastructure Summit, May 2, 2017, Savannah, GA.
- Co-author of: "Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Pauline M. Ahern, and Frank J. Hanley, The Electricity Journal, May, 2013.
- "Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks", before the Society of Utility and Regulatory Financial Analysts: 45th Financial Forum, April 17-18, 2013, Indianapolis, IN.

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Regulatory Commission of Alaska				
Alaska Power Company	09/20	Alaska Power Company; Goat Lake Hydro, Inc.; BBL Hydro, Inc.	Tariff Nos. TA886-2; TA6-521; TA4-573	Capital Structure
Alaska Power Company	07/16	Alaska Power Company	Docket No. TA857-2	Rate of Return
Alberta Utilities Commission				
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	01/20	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2021 Generic Cost of Capital, Proceeding ID. 24110	Rate of Return
Arizona Corporation Commission				
EPCOR Water Arizona, Inc.	06/20	EPCOR Water Arizona, Inc.	Docket No. WS-01303A-20-0177	Rate of Return
Arizona Water Company	12/19	Arizona Water Company – Western Group	Docket No. W-01445A-19-0278	Rate of Return
Arizona Water Company	08/18	Arizona Water Company – Northern Group	Docket No. W-01445A-18-0164	Rate of Return
Colorado Public Utilities Commission				
Summit Utilities, Inc.	04/18	Colorado Natural Gas Company	Docket No. 18AL-0305G	Rate of Return
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Rate of Return
Delaware Public Service Commission				
Delmarva Power & Light Co.	11/20	Delmarva Power & Light Co.	Docket No. 20-0149 (Electric)	Return on Equity
Delmarva Power & Light Co.	10/20	Delmarva Power & Light Co.	Docket No. 20-0150 (Gas)	Return on Equity
Tidewater Utilities, Inc.	11/13	Tidewater Utilities, Inc.	Docket No. 13-466	Capital Structure
Public Service Commission of the District of Columbia				
Washington Gas Light Company	09/20	Washington Gas Light Company	Formal Case No. 1162	Rate of Return
Federal Energy Regulatory Commission				
LS Power Grid California, LLC	10/20	LS Power Grid California, LLC	Docket No. ER21-195-000	Rate of Return
Florida Public Service Commission				
Tampa Electric Company	04/21	Tampa Electric Company	Docket No. 20210034-EI	Return on Equity
Peoples Gas System	09/20	Peoples Gas System	Docket No. 20200051-GU	Rate of Return
Utilities, Inc. of Florida	06/20	Utilities, Inc. of Florida	Docket No. 20200139-WS	Rate of Return
Hawaii Public Utilities Commission				
Launiupoko Irrigation Company, Inc.	12/20	Launiupoko Irrigation Company, Inc.	Docket No. 2020-0217 / Transferred to 2020-0089	Capital Structure
Lanai Water Company, Inc.	12/19	Lanai Water Company, Inc.	Docket No. 2019-0386	Cost of Service / Rate Design
Manele Water Resources, LLC	08/19	Manele Water Resources, LLC	Docket No. 2019-0311	Cost of Service / Rate Design
Kaupulehu Water Company	02/18	Kaupulehu Water Company	Docket No. 2016-0363	Rate of Return
Aqua Engineers, LLC	05/17	Puhi Sewer & Water Company	Docket No. 2017-0118	Cost of Service / Rate Design
Hawaii Resources, Inc.	09/16	Laie Water Company	Docket No. 2016-0229	Cost of Service / Rate Design
Illinois Commerce Commission				
Utility Services of Illinois, Inc.	02/21	Utility Services of Illinois, Inc.	Docket No. 21-0198	Rate of Return

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Ameren Illinois Company d/b/a Ameren Illinois	07/20	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 20-0308	Return on Equity
Utility Services of Illinois, Inc.	11/17	Utility Services of Illinois, Inc.	Docket No. 17-1106	Cost of Service / Rate Design
Aqua Illinois, Inc.	04/17	Aqua Illinois, Inc.	Docket No. 17-0259	Rate of Return
Utility Services of Illinois, Inc.	04/15	Utility Services of Illinois, Inc.	Docket No. 14-0741	Rate of Return
Indiana Utility Regulatory Commission				
Aqua Indiana, Inc.	03/16	Aqua Indiana, Inc. Aboite Wastewater Division	Docket No. 44752	Rate of Return
Twin Lakes, Utilities, Inc.	08/13	Twin Lakes, Utilities, Inc.	Docket No. 44388	Rate of Return
Kansas Corporation Commission				
Atmos Energy	07/19	Atmos Energy	19-ATMG-525-RTS	Rate of Return
Kentucky Public Service Commission				
Bluegrass Water Utility Operating Company	10/20	Bluegrass Water Utility Operating Company	2020-00290	Return on Equity
Louisiana Public Service Commission				
Southwestern Electric Power Company	12/20	Southwestern Electric Power Company	Docket No. U-35441	Return on Equity
Atmos Energy	04/20	Atmos Energy	Docket No. U-35535	Rate of Return
Louisiana Water Service, Inc.	06/13	Louisiana Water Service, Inc.	Docket No. U-32848	Rate of Return
Maryland Public Service Commission				
Washington Gas Light Company	08/20	Washington Gas Light Company	Case No. 9651	Rate of Return
FirstEnergy, Inc.	08/18	Potomac Edison Company	Case No. 9490	Rate of Return
Massachusetts Department of Public Utilities				
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Elec.)	D.P.U. 19-130	Rate of Return
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Gas)	D.P.U. 19-131	Rate of Return
Liberty Utilities	07/15	Liberty Utilities d/b/a New England Natural Gas Company	Docket No. 15-75	Rate of Return
Minnesota Public Utilities Commission				
Northern States Power Company	11/20	Northern States Power Company	Docket No. E002/GR-20-723	Rate of Return
Mississippi Public Service Commission				
Atmos Energy	03/19	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Atmos Energy	07/18	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Missouri Public Service Commission				
Spire Missouri, Inc.	12/20	Spire Missouri, Inc.	Case No. GR-2021-0108	Return on Equity
Indian Hills Utility Operating Company, Inc.	10/17	Indian Hills Utility Operating Company, Inc.	Case No. SR-2017-0259	Rate of Return
Raccoon Creek Utility Operating Company, Inc.	09/16	Raccoon Creek Utility Operating Company, Inc.	Docket No. SR-2016-0202	Rate of Return
Public Utilities Commission of Nevada				
Southwest Gas Corporation	08/20	Southwest Gas Corporation	Docket No. 20-02023	Return on Equity
New Hampshire Public Utilities Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Aquarion Water Company of New Hampshire, Inc.	12/20	Aquarion Water Company of New Hampshire, Inc.	Docket No. DW 20-184	Rate of Return
New Jersey Board of Public Utilities				
Atlantic City Electric Company	12/20	Atlantic City Electric Company	Docket No. ER20120746	Return on Equity
FirstEnergy	02/20	Jersey Central Power & Light Co.	Docket No. ER20020146	Rate of Return
Aqua New Jersey, Inc.	12/18	Aqua New Jersey, Inc.	Docket No. WR18121351	Rate of Return
Middlesex Water Company	10/17	Middlesex Water Company	Docket No. WR17101049	Rate of Return
Middlesex Water Company	03/15	Middlesex Water Company	Docket No. WR15030391	Rate of Return
The Atlantic City Sewerage Company	10/14	The Atlantic City Sewerage Company	Docket No. WR14101263	Cost of Service / Rate Design
Middlesex Water Company	11/13	Middlesex Water Company	Docket No. WR1311059	Capital Structure
New Mexico Public Regulation Commission				
Southwestern Public Service Company	01/21	Southwestern Public Service Company	Case No. 20-00238-UT	Return on Equity
North Carolina Utilities Commission				
Piedmont Natural Gas Co.Inc.	03/21	Piedmont Natural Gas Co., Inc.	Docket No. G-9, Sub 781	Return on Equity
Duke Energy Carolinas, LLC	07/20	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1214	Return on Equity
Duke Energy Progress, LLC	07/20	Duke Energy Progress, LLC	Docket No. E-2, Sub 1219	Return on Equity
Aqua North Carolina, Inc.	12/19	Aqua North Carolina, Inc.	Docket No. W-218 Sub 526	Rate of Return
Carolina Water Service, Inc.	06/19	Carolina Water Service, Inc.	Docket No. W-354 Sub 364	Rate of Return
Carolina Water Service, Inc.	09/18	Carolina Water Service, Inc.	Docket No. W-354 Sub 360	Rate of Return
Aqua North Carolina, Inc.	07/18	Aqua North Carolina, Inc.	Docket No. W-218 Sub 497	Rate of Return
North Dakota Public Service Commission				
Northern States Power Company	11/20	Northern States Power Company	Case No. PU-20-441	Rate of Return
Public Utilities Commission of Ohio				
Aqua Ohio, Inc.	05/16	Aqua Ohio, Inc.	Docket No. 16-0907-WW-AIR	Rate of Return
Pennsylvania Public Utility Commission				
Valley Energy, Inc.	07/19	C&T Enterprises	Docket No. R-2019-3008209	Rate of Return
Wellsboro Electric Company	07/19	C&T Enterprises	Docket No. R-2019-3008208	Rate of Return
Citizens' Electric Company of Lewisburg	07/19	C&T Enterprises	Docket No. R-2019-3008212	Rate of Return
Steelton Borough Authority	01/19	Steelton Borough Authority	Docket No. A-2019-3006880	Valuation
Mahoning Township, PA	08/18	Mahoning Township, PA	Docket No. A-2018-3003519	Valuation
SUEZ Water Pennsylvania Inc.	04/18	SUEZ Water Pennsylvania Inc.	Docket No. R-2018-000834	Rate of Return
Columbia Water Company	09/17	Columbia Water Company	Docket No. R-2017-2598203	Rate of Return
Veolia Energy Philadelphia, Inc.	06/17	Veolia Energy Philadelphia, Inc.	Docket No. R-2017-2593142	Rate of Return
Emporium Water Company	07/14	Emporium Water Company	Docket No. R-2014-2402324	Rate of Return
Columbia Water Company	07/13	Columbia Water Company	Docket No. R-2013-2360798	Rate of Return
Penn Estates Utilities, Inc.	12/11	Penn Estates, Utilities, Inc.	Docket No. R-2011-2255159	Capital Structure / Long-Term Debt Cost Rate

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
South Carolina Public Service Commission				
Blue Granite Water Co.	12/19	Blue Granite Water Company	Docket No. 2019-292-WS	Rate of Return
Carolina Water Service, Inc.	02/18	Carolina Water Service, Inc.	Docket No. 2017-292-WS	Rate of Return
Carolina Water Service, Inc.	06/15	Carolina Water Service, Inc.	Docket No. 2015-199-WS	Rate of Return
Carolina Water Service, Inc.	11/13	Carolina Water Service, Inc.	Docket No. 2013-275-WS	Rate of Return
United Utility Companies, Inc.	09/13	United Utility Companies, Inc.	Docket No. 2013-199-WS	Rate of Return
Utility Services of South Carolina, Inc.	09/13	Utility Services of South Carolina, Inc.	Docket No. 2013-201-WS	Rate of Return
Tega Cay Water Services, Inc.	11/12	Tega Cay Water Services, Inc.	Docket No. 2012-177-WS	Capital Structure
Tennessee Public Utility Commission				
Piedmont Natural Gas Company	07/20	Piedmont Natural Gas Company	Docket No. 20-00086	Return on Equity
Public Utility Commission of Texas				
Southwestern Public Service Company	02/21	Southwestern Public Service Company	Docket No. 51802	Return on Equity
Southwestern Electric Power Company	10/20	Southwestern Electric Power Company	Docket No. 51415	Rate of Return
Virginia State Corporation Commission				
Virginia Natural Gas, Inc.	04/21	Virginia Natural Gas, Inc.	PUR-2020-00095	Return on Equity
Massanutten Public Service Corporation	12/20	Massanutten Public Service Corporation	PUE-2020-00039	Return on Equity
Aqua Virginia, Inc.	07/20	Aqua Virginia, Inc.	PUR-2020-00106	Rate of Return
WGL Holdings, Inc.	07/18	Washington Gas Light Company	PUR-2018-00080	Rate of Return
Atmos Energy Corporation	05/18	Atmos Energy Corporation	PUR-2018-00014	Rate of Return
Aqua Virginia, Inc.	07/17	Aqua Virginia, Inc.	PUR-2017-00082	Rate of Return
Massanutten Public Service Corp.	08/14	Massanutten Public Service Corp.	PUE-2014-00035	Rate of Return / Rate Design

Summary

Talha Sheikh joined ScottMadden in 2015. As part of ScottMadden, he has worked with major utilities helping them develop growth strategy, benchmark and improve cost efficiencies, and prepare regulatory filings. Mr. Sheikh is an integral part of ScottMadden's Rates and Regulation practice. He has assisted on numerous regulatory initiatives with leading U.S. electric, gas, and water utilities. These include project management support in rate proceedings, class cost of service and rate design studies, revenue requirement development, alternative rates, cash working capital, and return on equity analyses. Mr. Sheikh earned an M.B.A from University of South Carolina, Moore School of Business and a B.B.A from Institute of Business Administration, Karachi.

Areas of Specialization

- Regulatory strategy and rate case support
- Class cost of service and rate design
- Revenue requirement studies
- Cash working capital studies
- Benefit Cost Analyses (DER Programs)
- Operations improvement and Organization redesign
- Business analytics
- Organizational Benchmarking

Recent Assignments

- Lead the development of a comprehensive rate filing for a southwestern utility that included preparation of the utility's revenue requirements, class cost of service study, rate design analyses, and the lead-lag study. Each of the studies were developed separately for the utility's three jurisdictions with various regulatory implications and issues. Prepared and filed supporting testimonies and workpapers for the rate filing.
- Lead the development of numerous class cost of service and rate design filings including:
 - Rate design studies for a leading electric utility with multiple jurisdictions through United States. Developed class cost of service and rate design studies for the utility's multiple jurisdictions. Prepared and filed supporting testimonies and workpapers as part of their rate cases.
 - Rate design studies for a leading midwestern utility with multiple jurisdictions. Conducted a Class Cost of Service study to design rates, prepared support for utility's proposal for cost trackers, and developed analyses for a weather normalization mechanism. Prepared and filed supporting testimony and workpapers as part of the rate case.
 - Rate design studies for a southwestern utility with two jurisdictions. Conducted a Class Cost of Service study, and prepared and filed supporting testimony and workpapers as part of the rate case.
 - Rate design studies for a leading midwestern gas utility. Conducted class cost of service study, designed rates, and supported the settlement discussions in rate filings. The study included consolidating the commercial customer classes and restructuring their tariffs from seasonal block rates to straight-fixed variable rates.
 - Rate design study for a midwestern water utility. Conducted class cost of service study consistent with industry practice, designed rates, and prepared supporting testimony for the rate filing.
- Lead the development of a research report for three major Massachusetts Electric Distribution Companies on DER Interconnection cost allocation methods in the United States. The report included extensive discussion on each method including 'lessons learned from Transmission cost allocation', assessment of each method aligned with utility objectives, and a feasibility analysis of each method from a renewable project developer's perspective. The report was filed with the Massachusetts Department of Public Utilities.
- Provided project management support to a vertically integrated New York utility for the submission of its electric rate case. Support included performing quality assurance reviews of all capital project documentation, assisting in the writing of witness testimony with supporting exhibits, and ensuring compliance with REV
- Supported a New York electric utility in the development and filing of its Earnings Adjustment Mechanisms (EAM) proposal as part of the New York Reforming the Energy Vision (REV) proceeding. Key tasks included: prepared research and analysis of utility incentive mechanisms; assisted in development of the EAM metrics that support utility's efforts toward deployment of DER and market transformation; evaluated the DER programs through a comprehensive Benefit-Cost Analysis consistent with Commission's guidance, and; prepared testimony, supporting analyses, and workpapers to be filed as part of the rate case

- Lead the development of an assessment report for a Canadian utility's lost and unaccounted for gas (LAUF). The report included development of benchmarking analyses, assessment of current and future initiatives, and presentation of key findings and recommendations related to controlling and improving LAUF. The assessment report was filed with the province's regulatory agency.
- Lead the development of a business expansion study for a northeastern gas utility. The study included developing cost estimates for service expansion, assessing market potential, and conducting feasibility assessments for the service expansion, including analyzing impact on new and existing ratepayers.
- Supported a Midwest region natural gas utility's proposal for energy efficiency shareholder incentives. The support included development of a financial analysis to evaluate benefits of various shareholder incentive mechanisms currently implemented within United States.
- Assessed a New Jersey utility's natural gas service structure to identify factors driving revenue under-collection and presented options to minimize the revenue deficit in the future. Provided additional support in assessing the utility's lost and unaccounted for gas, factors contributing towards it, and financial impact of utility's initiatives.
- Prepared supporting analysis for a utility's upcoming Community Solar program. Key tasks included preparing research and analysis on Community Solar programs throughout U.S, preparing revenue requirement analysis of the solar facility through the asset life, and preparing participant and non-participant bill impact analyses for residential, commercial, and large volume customers.
- Supported development of an alternative rates mechanism proposal for a Northeast region natural gas utility. The proposal included development of a Dupont Analysis to evaluate the potential positive impact of establishing the alternative rate mechanism.
- Supported streamlining of rate design analyses of a Northeast region natural gas utility. The support included presenting the best practices related to financial modeling and evaluating the utility's rate design analyses against these best practices.
- Conducted a staffing peer-benchmarking analysis for the nuclear fuels department of one of the largest electric power holding companies in the U.S.
- Supported the transition planning, organizational restructuring, and process improvement efforts for a multi-billion-dollar power plant project.
- Supported the development of a business acquisition plan for a construction company focused on entering the U.S. renewables and Transmission & Distribution construction market.

RATE CASE SUPPORT EXPERIENCE

Sponsor Company	Date Filed	Docket No.	Subject Matter
Arkansas Public Service Commission			
Liberty Utilities (Pine Bluff Water)	10/2018	Docket No. 18-027-U	Testimony supporting the class cost of service, rate design and bill impact studies for a general rate case proceeding.
California Public Utilities Commission			
Southwest Gas Corporation (Southern California, Northern California and South Lake Tahoe jurisdictions)	08/2019	Docket No. A.19-08-015	Testimony on behalf of three separate rate jurisdictions related to: revenue requirements, lead-lag/ cash working capital, and class cost of service, rate design and bill impact analysis for a general rate case proceeding.
Kansas Corporation Commission			
The Empire District Electric Company	12/2018	Docket No. 19-EPDE-223-RTS	Testimony supporting cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
Maine Public Utilities Commission			
Northern Utilities, Inc. d/b/a Unitil	06/2019	Docket No. 2019-00092	Testimony supporting a proposed capital investment cost recovery mechanism.
Michigan Public Service Commission			
Lansing Board of Water & Light and Michigan State University	04/2020	Docket No. U-20650	Testimony evaluating Consumer Energy's class cost of service and rate design proposals.
Lansing Board of Water & Light and Michigan State University	04/2019	Docket No. U-20322	Testimony evaluating Consumer Energy's class cost of service and rate design proposals.
Midland Cogeneration Ventures, LLC	09/2018	Docket No. U-18010	Testimony evaluating Consumer Energy's class cost of service and rate design proposals.
Missouri Public Service Commission			
The Empire District Electric Company	08/2019	Docket No. ER-2019-0374	Testimony supporting the class cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a weather normalization mechanism.
Liberty Utilities (Midstates Natural Gas)	09/2017	Docket No. GR-2018-0013	Testimony supporting the class cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a revenue decoupling/ weather normalization mechanism as well as tracker accounts for certain O&M expenses and capital costs.
Missouri Gas Energy	04/2017	Docket No. GR-2017-0216	Testimony supporting the class cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
Laclede Gas Company	04/2017	Docket No. GR-2017-0215	Testimony supporting the class cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
Nevada Public Utilities Commission			
Southwest Gas Corporation	02/2020	Docket No. 20-02023	Testimony supporting the class cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
New Jersey Board of Public Utilities			
South Jersey Gas Company	03/2020	Docket No. GR20030243	Testimony supporting the Lead/Lag study for a general rate case proceeding.
Elizabethtown Gas Company	04/2019	Docket No. GR19040486	Testimony supporting the Lead/Lag study for a general rate case proceeding.

Sponsor Company	Date Filed	Docket No.	Subject Matter
Corporation Commission of Oklahoma			
The Empire District Electric Company	03/2019	Cause No. PUD 201800133	Testimony supporting the class cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
Railroad Commission of Texas			
Texas Gas Service Company – Central Texas and Gulf Coast Service Areas	12/2019	GUD No. 10928	Testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – Beaumont/ East Texas Division	11/2019	GUD No. 10920	Testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Borger/ Skellytown Service Area	08/2018	GUD No. 10766	Testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – North Texas Service Area	06/2018	GUD No. 10739	Testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – South Texas Division	11/2017	GUD No. 10669	Testimony supporting the Lead/Lag study for a general rate case proceeding.
Public Utility Commission of Texas			
CenterPoint Energy Houston Electric, LLC	04/2019	Docket No. 49421	Testimony supporting the Lead/Lag study for a general rate case proceeding.
Virginia State Corporation Commission			
American Electric Power - Appalachian Power Company	03/2020	Case No. PUR-2020-00015	Testimony supporting the Lead/Lag study for the 2020 triennial review of base rates, terms and conditions.



ATTACHMENT B – REFERENCES

Timothy Lyons, Partner	[REDACTED]	[REDACTED]	[REDACTED]
Dylan D'Ascendis, Director	[REDACTED]	[REDACTED]	[REDACTED]

REDACTED

Northern Utilities, Inc.
New Hampshire Division
d/b/a Unitil
Request for Proposal

Area 1: Allocated Cost of Service Study (ACSS), Marginal Cost Study (MCS), Rate Design and Weather, Sales and Revenue Normalization

Attachment 1

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration			
Research			
Analyses or Studies			
Other Direct Costs			
Total Not To Exceed (through filing)			
Respond to Discovery			
Assist in the Interrogation of Testimony			
Prepare Rebuttal Testimony			
Attend Hearings			
Respond to In-Hearing Record Requests			
Assist in Drafting of Legal Brief			
Other Direct Costs			
Total Cost Estimates (post-filing)			
Grand Total			

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.

REDACTED

Northern Utilities, Inc.
New Hampshire Division
d/b/a Unitil
Request for Proposal

Area 2: Revenue Decoupling
Attachment 2

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration			
Research			
Analyses or Studies			
Other Direct Costs			
Total Not To Exceed (through filing)			
Respond to Discovery			
Assist in the Interrogation of Testimony			
Prepare Rebuttal Testimony			
Attend Hearings			
Respond to In-Hearing Record Requests			
Assist in Drafting of Legal Brief			
Other Direct Costs			
Total Cost Estimates (post-filing)			
Grand Total			

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.

REDACTED

Northern Utilities, Inc.
New Hampshire Division
d\b\ a Unitil
Request for Proposal

Area 3: Return on Equity
Attachment 3

PROJECT PRICE SHEET FOR SCOPE OF PROPOSED WORK ⁽¹⁾

PROPOSED WORK ELEMENTS	By Element	Sub-Total	Total Costs
Project Planning and Administration	██████		
Research	██████		
Analyses or Studies	██████		
Other Direct Costs	██████		
Total Not To Exceed (through filing)		██████	
Respond to Discovery	██████		
Assist in the Interrogation of Testimony	██████		
Prepare Rebuttal Testimony	██████		
Attend Hearings	██████		
Respond to In-Hearing Record Requests	██████		
Assist in Drafting of Legal Brief	██████		
Other Direct Costs	█ ███		
Total Cost Estimates (post-filing)		██████	
Grand Total			██████

- (1) Include all labor and other direct cost assumptions for all proposed work elements. Costs through preparation of the filing are not to exceed cost estimates and will not be reimbursed for costs over the estimates, unless prior written approval from Unitil has been obtained. Post-filing activities may be bid on a time and materials basis. Include separate spreadsheets that itemize the number of hours and hourly rate of each consultant expected to assist on the project, and other direct cost assumptions for all proposed work elements. A narrative description of the work covered by each task (e.g. for meetings, price assumes a certain number of meetings) will assist Unitil in evaluating the bids. The response must also include applicable labor rates and clearly identify any markups that will be applied under the Scope of Proposed Work.

REDACTED

Northern Utilities, Inc.
Rate Case Consulting Services Agreement

THIS AGREEMENT for the provision of Consulting Services (“Agreement” or “Consulting Services Agreement”), made and entered into on May 11, 2021, by and between Northern Utilities, Inc. (“Northern” or “the Company”), a New Hampshire public utility corporation with its principal place of business at 6 Liberty Lane West, Hampton, NH 03842 and **ScottMadden, Inc.** (“Consultant”), having its principal place of business at 1900 West Park Drive, Suite 250, Westborough, MA 01581.

1. Services and Deliverables

Consultant will provide the following services to the Company and furnish the following deliverables (the “Services”): **Revenue Decoupling**, as described in Unitil’s Rate Case Studies RFP No. USC-42021, and any attachments thereto, as may be modified from time to time by mutual consent, evidenced in writing and signed by both parties.

2. Do Not Exceed Costs

As provided in the Consultant’s Response to the RFP dated May 3, 2021, for the **Revenue Decoupling**, the cost through the Company’s filing of its rate case shall not exceed [REDACTED].

3. Independent Contractor

Consultant is an independent contractor and not an employee or agent of Northern, Unitil Corporation or any subsidiary thereof. Consultant assumes full and sole responsibility for the payment of all compensation and expenses of its employees and for all of their state and federal income tax, unemployment insurance, Social Security, payroll and other applicable employee withholdings.

4. Subcontractors

The Company reserves the right to refuse to permit any person or organization (subcontractor) to participate in the work covered by this Contract, such refusal shall not be unreasonably imposed. No subcontract, if approved by the Company, shall relieve the Consultant of any liabilities or obligations under the Agreement, and the Consultant agrees that Consultant is

fully responsible to the Company for the acts and omissions of Consultant's subcontractors and of persons employed by them. Consultant shall require every subcontractor to comply with the provisions of the Agreement, including the Mutual Confidential Non-Disclosure Agreement.

5. Supervision

Consultant shall perform the Services with reasonable care in a diligent and competent manner. Consultant shall maintain control over its employees and all of its subcontractors.

6. Liability and Indemnification

The Consultant agrees to indemnify, hold harmless and defend the Company, its parent, subsidiaries and affiliates and their respective employees, agents, officers, and directors, from and against any and all liability for loss, damages, fines, penalties, claims, actions, proceedings, expense, or cost, including but not limited to attorney's fees and litigation expenses which may be asserted against the Company or which the Company may incur or be held liable by reason of:

- bodily injury, including death, sustained by or alleged to have been sustained by any person or persons, including but not limited to employees of the Company, employees of the Consultant, employees of any subcontractor or any other third parties, and without regard to whether the person or persons are working within the scope of their employment;
- damage to property;
- personal injury, including but not limited to, false arrest, false imprisonment, or violation of privacy rights;
- any unlawful employment practice of the Consultant or any subcontractor, including without limitation, employment discrimination, wrongful discharge, termination of employment or violation of state or federal statutes or regulations relating to employment practices; or
- resulting from the acts and/or omissions of Consultant or subcontractor, its employees, agents, subcontractors or those under its or their control, and/or arising

out of or in any manner connected with the performance of this Agreement or the operations to be performed under this Agreement to the extent such injury or damage is caused by or is attributable in whole or in part to any act or omission of the Consultant, its affiliates or its or their employees or agents or those under its or their control; provided, however, that the Consultant shall not be held responsible for damage to private property when such damage results from the Consultant's having carried out in a proper workmanlike manner instructions received from a duly authorized representative of the Company as to the use to be made of, or act to be performed on, such private property.

7. Payment

Payment for services rendered shall be at the billing rate or rates as set forth at Page 17, Table 1 of the Consultant's Response to the RFP dated May 3, 2021. Consistent with the requirements of the New Hampshire Public Utilities Commission, the Company requires detailed hourly billing that will withstand the scrutiny of the Commission for rate case cost recovery. This means that bills should be detailed enough to justify cost recovery to the Commission while not divulging litigation work product, and shall at a minimum include the number of hours worked, the billing rate, and the specific nature of services performed. All other out-of-pocket expenses, including cost of travel or travel-related expenses, telephone, duplication, and delivery costs ("Other Direct Costs") should be tracked and identified separately on bills. The Company will remit payment on all appropriate invoices within thirty (30) days of receipt.

8. Confidentiality

Consultant acknowledges and agrees that due to the unique nature of this Agreement, Consultant shall be required to enter into a separate Mutual Confidential Non-Disclosure Agreement with Company in the form attached hereto as Attachment 1.

9. Non-Solicitation

During the term of this engagement, and for a period of one year following its expiration or termination, Consultant will not directly or indirectly solicit, employ or otherwise engage any

Company employees (including former employees) or contractors who were involved in the engagement.

10. Complete Agreement

This Agreement constitutes the complete agreement between the Parties on the subject matter identified herein, and supersedes all prior oral and written communications between the Parties, and may be amended, modified or changed only in writing when signed by both parties. No term of this Agreement will be deemed waived, and no breach of this agreement excused, unless the waiver or consent is in writing signed by the party granting such waiver or consent.

11. Compliance with Laws

Consultant warrants that in performing work under this order Consultant will comply with all applicable laws, rules and regulations of governmental authorities and agrees to indemnify and save the Company harmless from and against any and all liabilities, claims, costs, losses, expenses, and judgments arising from or based on any actual or asserted violation by the Consultant of any such applicable laws, rules and regulations.

12. Assignment

Consultant agrees that neither this Agreement nor any interest herein shall be assigned or transferred by Consultant except with the prior written approval of the Company.

13. Governing Law

The rights of the parties hereto and the construction and effect of this contract shall be subject to and determined in accordance with the laws of the State of New Hampshire.

14. Severability

If any particular provision of this Contract be rendered or declared invalid by a court of competent jurisdiction of the State of New Hampshire, such invalidation of such part or portion of this Contract should not invalidate the remaining portions thereof, and they shall remain in full force and effect.

NORTHERN UTILITIES, INC.

By: Robert B. Hevert

Robert B. Hevert

NAME (PRINT OR TYPE)

TITLE: Sr. Vice President

Date: May 11, 2021

SCOTTMADDEN, INC.

By: Logan Toms

Logan Toms

NAME (PRINT OR TYPE)

TITLE: Partner & Director of Finance

Date: May 11, 2021

ATTACHMENT 1:
MUTUAL CONFIDENTIAL NON-DISCLOSURE AGREEMENT

This MUTUAL CONFIDENTIAL NON-DISCLOSURE AGREEMENT is made as of May 11, 2021 between **ScottMadden, Inc.** (“Consultant”), having its principal place of business at 1900 West Park Drive, Suite 250, Westborough, MA 01581, and **Northern Utilities, Inc.** (“the Company”) having a principal place of business at 6 Liberty Lane West, Hampton, NH 03842, (together “the Parties,” individually “a Party”). The Parties hereby agree that disclosures of confidential information shall be governed by the following terms and conditions. A Party receiving information under this Agreement is referred to as "Recipient," and a Party disclosing information is referred to as "Discloser."

1. Definition of Confidential Information “Confidential Information” means any oral, written, graphic or machine-readable information including, but not limited to, any and all confidential and proprietary information, including all information or material that has or could have commercial value or other utility in the business or the prospective business of the Discloser, disclosed by the Discloser to the Recipient in connection with this Agreement, whether committed to memory or embodied in writing or other tangible form. Confidential Information includes, without limitation, contracts, fees, accounts, records, customer and client information, agreements and any other incident of the Discloser's business disclosed to the Recipient, which Confidential Information is clearly marked or identified as being “confidential” or “proprietary” (or a similar restrictive legend). Confidential Information does not include any information which Recipient can document: (a) is known to Recipient at the time of disclosure; (b) is independently developed by Recipient without use of the Confidential Information; (c) becomes known to Recipient from another source without confidentiality restriction on subsequent disclosure or use; (d) is or becomes part of the public domain through no wrongful act of Recipient; or (e) is information approved for disclosure or release by the Recipient by written authorization from the Discloser. Confidential Information does not include any source code or technical information subject to a license that meets the requirements of the Open source Definition. The Open Source Definition is found at <http://www.opensource.org/osd.html>.

2. Purpose for Disclosure The Parties may only use Confidential Information for the following purpose (the “Purpose”): Providing services as described in the Consulting Services Agreement between the Parties.

3. Non-Disclosure of Confidential Information Recipient agrees: (i) to use the same degree of care, but no less than a reasonable degree of care, to protect against the unauthorized disclosure of Discloser’s Confidential Information as it uses to protect its own Confidential Information; (ii) not to divulge any such Confidential Information or any information derived therefrom to any third person; (iii) not to make any use whatsoever at any time of such Confidential Information except as necessary in accordance with the Purpose; (iv) not to copy or reverse engineer any such Confidential Information; and (v) not to export or re-export (within the meaning of U.S. or other export control laws or regulations) any such Confidential Information or product thereof. Recipient agrees to disclose Confidential Information only to its directors, officers, employees, consultants, agents or independent contractors (its “Representatives”) with a direct need to know to effect the Purpose, and who are bound by legally enforceable obligations of confidentiality no less restrictive than the terms of this Agreement. Recipient shall not remove the proprietary notices from Confidential Information. Each Party agrees to promptly notify the other Party in writing of any misuse or misappropriation of Confidential Information of the other Party of which it becomes aware.

4. Mandatory Disclosure In the event that Recipient or its Representatives is requested or required by legal process or applicable regulations or laws to disclose any of the Confidential Information of Discloser, Recipient shall give prompt notice so that Discloser may seek a protective order or other appropriate relief. If such protective order is not obtained, Recipient shall disclose only that portion of the Confidential Information that its counsel advises that it is legally required to disclose.

5. Remedies Recipient acknowledges and agrees that due to the unique nature of Discloser’s Confidential Information, there may be no adequate remedy at law for any breach of Recipient’s obligations hereunder, which breach may result in irreparable harm to the Discloser and therefore, that upon any such breach of any threat thereof, the Discloser shall be entitled to seek appropriate equitable relief in addition to whatever remedies it might have at law.

6. Term The foregoing commitments of each Party shall survive any termination of the Purpose, and shall remain in effect with respect to any particular Confidential Information unless and until the Recipient can document that one of the exceptions stated in Section 1 applies, or unless mutually agreed, as evidenced by writing, to a shorter period.

7. No Additional Agreements; No Prohibition on Agreements Nothing herein shall obligate either Party to disclose any Confidential Information or negotiate or enter into any agreement or relationship with the other Party. Nothing herein shall prohibit a Party from entering into any arrangement or agreement with a third party.

8. No Warranty The Parties understand and agree that Confidential Information is provided “as is”; neither Party shall have any responsibility to the other based on any claim that any information furnished hereunder was incorrect, incomplete, or defective in any way. Neither Party makes any warranties, whether express, implied or statutory, regarding the sufficiency of the information disclosed for any purpose, including warranties of merchantability, fitness for a particular purpose, and non-infringement.

9. General (a) Assignment: This Agreement is not assignable or transferable by either Party; any attempted assignment will be void and without effect, unless such assignment is agreed to in writing by both Parties. (b) No Other Rights: No rights, title, license of any kind in any Confidential Information is provided hereunder, either expressly or by implication, estoppel or otherwise. (c) No Agency: This Agreement does not create any agency or partnership relationship. (d) No Waiver: No waiver of any provision of this Agreement, or a breach of this Agreement shall be effective unless it is in writing, signed by the Party waiving the provision or the breach. No waiver of a breach of this Agreement (whether express or implied) shall constitute a waiver of a subsequent breach of this Agreement. (e) Choice of Law: This Agreement will be governed by and interpreted in accordance with the laws of the State of New Hampshire, excluding its choice of laws rules. (f) Complete Agreement: This Agreement constitutes the complete agreement between the Parties on the subject matter identified herein.

Any modifications to this Agreement must be made in writing and signed by both Parties.

NORTHERN UTILITIES, INC.

SCOTTMADDEN, INC.

By: Robert B. Hevert

By: Logan Toms

Robert B. Hevert

Logan Toms

NAME (PRINT OR TYPE)

NAME (PRINT OR TYPE)

TITLE: Sr. Vice President

TITLE: Partner & Director of Finance

Date: May 11, 2021

Date: May 11, 2021