EXHIBIT

#16

DG 17-048

BEFORE THE STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

In the matter of

DG 17-048

Liberty Utilities – EnergyNorth Gas Distribution Rates

Direct Prefiled Testimony

Of

James J Brennan

Finance Director

On behalf of

The New Hampshire Office of the Consumer Advocate

Dated: **November 30, 2017**

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I: INTRODUCTION AND OVERVIEW

Q. Please state your name, business address and current position.

A. My name is Jim Brennan. I am the Finance Director at the New Hampshire Office of the Consumer Advocate (OCA). My business address is 21 South Fruit Street, Suite 18, Concord, New Hampshire.

Q. Please describe your education and professional experience.

A. I earned a Bachelor degree from Saint Bonaventure University and an MBA in Finance at Syracuse University in 1980. I completed a nine month JP Morgan Chase (formerly Chemical Bank) MBA Management Training Program. I have completed additional courses in business, finance, software development, electric utility regulation, regulatory finance and accounting, and Smart Grid.

In my present position at the OCA I perform economic and financial analysis of utility filings across all industries, draft discovery and testimony, and provide guidance on financial policy and regulatory issues.

My business career began in banking as First Vice President at Chemical Bank, 1980-1989, with responsibilities as analyst, credit department manager, account relationships, and course designer and instructor of Risk Assessment training. I have experience managing business and technology operations. At TD Waterhouse Securities, 1995-2001, I ran the third largest brokerage statement operation on Wall Street during a period of 400 percent growth with responsibilities for budget, operations, Information Technology data processing and New York Stock Exchange Compliance. Waterhouse's statement was awarded #1 ranking by Smart Money during my assignment. I have experience in IT project management and software design. Experience includes: implementation of paperless technology in Waterhouse Security National Investor Clearing Corporation stock clearing operation (2000); managing launch of an eServices web site providing on-line secure access of brokerage statements to 2.5 million Waterhouse clients (2001); designing Microsoft.NET and SQL Server based software systems for Mathematica Policy Research 2003-2006; and directing design, testing and launch of cloud based Microsoft Customer Relationship Management (CRM) applications for Southern New Hampshire University (2012-2013). I have designed and taught courses in Corporate Finance, Microsoft applications and Microsoft C# programming language.

Q. Have you previously provided testimony before the New Hampshire Public Utility Commission?

A. Yes.

Q. In which dockets did you testify?

A. I provided testimony before the Commission in the following dockets:

- DE 10-055 Unitil, Inc., rate case testimony assessing the company's smart grid investments ;
- DE 13-177 Public Service Company of New Hampshire (PSNH), testimony regarding Least Cost Integrated Resource Planning;
- DE 14-120 Public Service Company of New Hampshire (PSNH), testimony on reconciliation of the company's energy service costs;
- DW 13-130Pennichuck Water Works, Inc., this case dealt with the company's revenue deficiency;

- DG 15-090 Northern Utilities, Inc., testimony on design of interstate pipeline refund in cost of gas rates;
- DE 11-250 Public Service Company of New Hampshire (PSNH), testimony (adopted) on investigation of Merrimack Station scrubber project cost recovery;
- DE 14-238 Public Service Company of New Hampshire (PSNH), testimony on divestiture of PSNH generation assets;
- DE 15-137 Energy Efficiency Resource Standard, testimony on utilities empowering residential customer through modern electronic data platforms;
- DE 16-384 Unitil Energy Systems Inc., testimony on company pilot to design a utility energy data sharing platform;
- DE 16-383 Liberty Utilities Granite State Electric, testimony regarding long term trend and benchmark analysis using FERC data.
- DE 15-464 PSNH Lease to Northern Pass LLC, testimony valuing right-of-way assets for high voltage electric transmission use.

Q. Have you provided public comments to the Commission?

A. Yes, I provided public comments in the following docket:

- IR 15-296 Grid Modernization, comment on definition and elements of grid modernization.

Q. Have you prepared any tables to support for your direct testimony?

A. Yes, tables 1 through 11are included in-line within my testimony.

Q. What is the purpose of your testimony?

A. The primary purpose of my testimony is to address the revenue requirement and revenue deficiency proposed by EnergyNorth d/b/a Liberty Utilities (Liberty or Company) and present the impact of two OCA recommendations regarding Keene division (Keene) and Concord Training Center. I also make a recommendation that Liberty modify its existing method used to track actual vs budgeted cost of approved capital projects. Liberty's current project management process for multi-year projects does not enable comparison of actual project costs against budgeted costs on a lifetime basis.

Q. How is your testimony organized?

A. My testimony has five sections. The first section, Introduction and Overview, summarizes the purpose of my testimony and the organization of my testimony. The second section, Summary of Recommendations, briefly summarizes the OCA's three recommendations made in my testimony relative to revenue requirements and capital budget cost tracking. The third section, Background, discusses the background of EnergyNorth Gas (ENG) and Granite State Electric Corp (GSEC) dockets relevant to issues raised in my testimony relative to the Keene consolidation, OCA’s Training Center disallowance, and the recommendation for tracking life time budget variances on capital projects. The fourth section of my testimony discusses the Concord Training Center capital project and lack of evidence of prudency regarding Liberty's decisions and management of the Company's training needs. The fifth section, Revenue Requirement, discusses the Company's revenue request, methodology and OCA's adjustments and recommendation.

II: SUMMARY OF RECOMMENDATIONS

Q. Before summarizing your individual recommendations, please summarize and compare OCA's revenue requirements and revenue deficiency recommendation with the Company's proposal.

A. Table 1 summarizes OCA's recommendation in column 3 compared to the Company's consolidated proposal in column 1 and the Company's ENG proposal in column 2.

Table 1: Summary of Operating Income and Revenue Deficiency- Consolidated vs EnergyNorth Only

			1604: v11-23-17 Staff TS 1-1 Supplemental 17-048	
			Test Year	2016
			Tax factor	1.65
			OCA ROE	0.0840
			OCA WACC	0.0641
		col 1	col 2	col 3
Line		Consolidated 1604 ENG +Keene	Company Request ENG	OCA Recommendation (ENG division)
1	NOI Requirement	$ 18,565,401	$ 18,398,298	$ 15,792,558
2	NOI Present Rates	$ 9,592,661	$ 9,961,580	$ 10,190,780
3	NOI Deficiency	$ 8,972,740	$ 8,436,718	$ 5,601,778
4	Revenue Deficiency	$ 14,808,946	$ 13,924,275	$ 9,245,383

Q. What is OCA's revenue requirement recommendation?

A. The OCA recommends a revenue deficiency no greater than $9,245,383 for EnergyNorth. The recommendation is based on adjustments summarized below, which are further analyzed in Section IV. It also includes the impact of OCA's proposed return discussed in Section IV and presented in Table 10.

My recommendations are presented in the order discussed in my testimony as follows:

II.A Keene Division

Q. Please summarize your recommendation relative to Keene.

A. The OCA recommends Keene's $884,671 revenue requirement (see table 3) not be included in docket DG 17-048. OCA's recommendation is based on issues raised in the Keene acquisition docket DG 14-155 summarized in Section III of my testimony. The Commission's approval of EnergyNorth's Keene acquisition was premised upon the "no net harm" standard outlined in RSA

369:8, requiring that the transaction not "adversely affect rates…of a public utility in the state." *Liberty Utilities Co.*, Order No. 25,736 (Nov. 21, 2014). Keene has a negative operating income in test year 2016. The OCA is not against consolidation in principle as administrative efficiencies would likely occur. However, the Company has not addressed financial concerns of cost shifting and net harm raised in DG 14-155. The Company has not developed a business case or a financial analysis of Keene's future operations that would indicate a reversal in operating losses. Section IV of my testimony, Revenue Requirement, shows the removal of Keene's revenue requirement in Tables 4 through 7.

II.B Concord Training Center

Q. Please summarize your recommendation relative to the Concord Training Center

A. The OCA recommends removal of the Concord Training Center from EnergyNorth's proposed revenue requirement based it's on imprudent planning and management of the project. The Company acted imprudently by failing to conduct a meaningful business case analysis, perform a financial benefit-cost analysis, or evaluate alternatives to owning a training center during its planning and capital budget approval process. Additionally, following the decision to build the facility, the Company's failure to exercise fundamental project plan monitoring and tracking resulted in cost overruns. The original cost estimate approved in early 2014 was $1.1 million while the final cost as of test year 2016 was $3.8 million. Therefore, the OCA's revenue deficiency of $9,254,383, shown in table 1 column 3, includes a disallowance of the Concord Training Center's revenue requirement. Section IV of my testimony, Revenue Requirement, provides further information on the impact of removing the Concord Training Center from the Company's revenue requirement in Tables 2, 8, and 9.

II.C Capital Project Lifetime Cost Variance

Q. Please summarize your recommendation relative to tracking costs of capital projects.

A. The OCA recommends Liberty modify how it tracks actual costs of its capital projects to show project costs and variances over the projects entire life, not just annually. The purpose of the modification is to identify projects running over budget since inception. Liberty's current cost tracking process does not track costs on a lifetime basis and therefore cannot easily or efficiently identify over budget projects. Under questioning during the August 23, 2017 technical session on project costs, the Company was unable to indicate if larger multi-year projects were under or over budget on a lifetime basis. Liberty stated they track capital expenditures on a yearly basis. Capital expenditures for the life of the project are not tracked. Liberty’s ineffective control of capital expenditures and capital expenditure cost variances are also documented in the 2016 Management Audit which is discussed in Section IV A of my testimony - Context of 2016 Management Audit.

III: BACKGROUND

Q. Please discuss the Company's previous dockets relevant to issues in your testimony.

A. Three dockets relevant to issues discussed in my testimony are:

DG 14-155: Sale of New Hampshire Gas Corporation to Liberty Utilities EnergyNorth Gas (Keene or Keene division). Staff and OCA explain potential cost shifting risks to existing EnergyNorth customers if Keene is rolled into EnergyNorth systems (and rates), and that financial concerns can be addressed in future rate cases. Commission Order 25,736 on 11/21/2014 cites the no net harm standard of RSA 369:8, requiring Keene maintain separate distribution rates. According to the financial data included in the Company's 17-048 filing, Keene has negative earnings in test year 2016. I am not aware of any Company analysis such as a business plan, cash flow analysis, or financial plan including a forecast of future earnings that addresses potential cost shifting. Section V of my testimony, "Revenue Requirement" removes Keene's revenue requirement from the Company's consolidated proposal.

DG 14-180: EnergyNorth Distribution Rate case. This docket establishes EnergyNorth's current rates. EnergyNorth witness Christian Brouillard introduces the Concord Training Center[1] forecast to be used and useful by March 2015 and included as part of Liberty's proposed step increase. This docket mandated a Liberty Consulting Group's report titled "Management and Operations Audit of the Customer Service and Accounting Functions of Liberty Utilities" (referred to as "2016 Management Audit" in my testimony). Section IV of my testimony, "Concord Training Center" discusses the 2016 Management Audit as context and evidence that Liberty's management training center capital project was imprudent.

[1] "New Training Center in Concord (2014: approximately $1,450,000): EnergyNorth will be constructing a new state of the art Training Center in Concord. The new Liberty Utilities Center (LUTC) will be built at 10 Broken Bridge Road, Concord on property owned by the Company. The new two-story building will be approximately 6,200 square feet and contain two instructional classrooms to accommodate 15 students each, two offices, one lab, two accessible restrooms, and an accessible lift to the second-floor and lunchroom. The new facility will serve as a multi-purpose training center for year-round training of those employees who provide service to EnergyNorth and/or Granite State, and will provide a variety of technical hands-on training to meet federal and state mandated requirements for training, certification and re-certification for gas and electric employees and outside utility contractors. The LUTC outside grounds will have simulated gas distribution "leak field" for leak classification and gas line training" DG 14-180 Bates 175

DE 16-383: GSEC 2016 Distribution Rate case. In this docket the Concord Training Center cost recovery decision, relative to GSEC proposed training center lease payment to EnergyNorth, is deferred to EnergyNorth's next rate case. Order No 26,005.

IV: CONCORD TRAINING CENTER

IV.A Context of 2016 Management Audit

Q. Before discussing training center specifically, please provide a contextual overview of Liberty's management of its planning and capital budgeting process since the 2012 acquisition and DE 11-040.

A. The 2016 Management Audit is part of the 14-180 docket I discussed briefly in Section III Background of my testimony. The audit occurred as Liberty was experiencing major operational, information technology, and customer service issues following parent Algonquin Power and Utilities Corporation's (APUC) purchase of GSEC and ENG.[2] The Liberty acquisition required APUC to design and build, from scratch, all the back-office systems for GSEC and ENG. The Liberty acquisition also represented APUC's first experience running an energy utility.[3]

The 2016 Management Audit's third section is titled "III. Planning and Budgeting". This section of the audit conveys three explicit conclusions relevant to my discussion of the Concord Training Center.[4]

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[2] DG 11-040 Order No. 25,370 approves transfer of ownership of GSEC, ENG to Liberty Energy Utilities Corp.

[3] Liberty Utilities acquired CalPeco Electric System, and electric distribution utility serving 48,500 customers, in 2011. Reference January 2017 Liberty Utilities Finance GP1 page 15.

[4] Liberty Consulting Group. "Final Report on A Management and Operations Audit of the Customer Service and Accounting Functions of Liberty Utilities." August 12, 2016. Available at: https://www.puc.nh.gov/regulatory/Docketbk/2014/14-180/LETTERS-MEMOS-TARIFFS/14-180_2016-08-15_STAFF_LCG_MANAGEMENT_AUDIT_FINAL_RPT.PDF

First, it found that Liberty's planning and analysis of capital projects is inadequate, stating that "Oakville Finance and the parent board were approving capital budgets of 80 plus line items that appear not to have been: [f]ully analyzed, [s]ubjected to considerations of alternatives, [s]upported by business case and capital expenditure applications, or [s]ubjected to detailed cost estimates." *id*. at III-26.[5]

Second, it concludes that internal planning and capital budgeting policies are not generally followed, stating that "New Hampshire operations are not following the policy requirements, especially the requirement that business cases be fully prepared." *id.*

Third, relevant to my discussion and recommendation on life time tracking of capital budgeting expenditures, the report describes Liberty's cost-tracking for capital expenditures as inadequate, stating that "[r]ecent capital expense variances demonstrate a lack of effective control of capital expenditures." *id.* at III-27.

Q. Do the conclusions you've cited from the audit section "Planning and Budgeting" apply to the Concord Training Center that was being approved at the time?

A. Yes, consistent with the 2016 Management Audit's conclusions that senior management and the parent company's board approved "80 plus line items" of capital projects without proper analysis, the discovery phase of DG 17-048

[5] Oakville Finance is located in Oakville Ontario and is part of APUC senior management.

provides evidence that the Concord Training Center project was poorly managed from inception, to approval, to local construction and ultimate completion at 270 percent over budget. Liberty management acted imprudently by failing to adequately identify and review possible less costly alternatives to building, owning and running a new training center. Liberty management also failed to follow internal policy requirements cited earlier, including the requirement that "business cases be fully prepared."

Q. What financial risks exist for rate payers due to Liberty not performing prudent capital budgeting and planning steps prior to construction a dedicated training center?

A. Liberty's lack of analysis in 2013-2014 created a risk that the incurred costs of building and maintaining a 6,200 square foot $3.8 million training facility could have been avoided if an analysis of other alternatives was performed, benefits weighed, and net present values (NPV) of alternative solutions compared – following standard business and finance best practices.

IV.B Evidence of Imprudence

Q. Regarding evidence, what time period does OCA view as relevant when evaluating prudence of Liberty's decision to build the Concord Training Center?

A. OCA's assessment of prudence is limited to documentation and analysis that existed at the time when the actual capital budgeting decision was made. To the best of my knowledge, and notwithstanding the fact that some documents of evidence lack senior management signatures, the decision to build the training center occurred in early 2014. Any and all documents leading up to the early 2014 decision are the OCA's primary evidence. Conversely, post decision documents, including discovery, testimony and other retrospective summaries of new benefits and new uses possible uses for the facility (for example customer outreach, training related events, emergency backup site) are not viewed relevant in the 2014 decision to build and own.[6]

Q. Please describe the scope of evidence you reviewed.

A. OCA reviewed filings and discovery related to the training center for dockets DG 14-180, DE 16-383, DG 16-560, and DG 17-048. I reviewed DE 11-040 and the 2016 Management Audit. Included in my review was Liberty's response to comprehensive data request OCA 4-20 in DG 17-048 requesting the business case that senior management used to approve the training center, the analysis of need for a new training center, the analysis of costs and benefits of a new training center, and the analysis of alternative solutions including the costs and benefits of such alternative solutions. See JJB-2.

Q. What evidence exists that Liberty's 2013-2014 planning and capital budget process, relative to the decision to build the Concord Training Center, was not prudent?

A. To my knowledge the only documentation of Liberty's analysis leading up to approval of the training center, is a 1/24/2014 two page business case received by the OCA on or near the August 28, 2017 technical session labeled PB-2.1

[6] Robert Burns, National Regulatory Research Institute, April 1985 "*The Prudent Investment Test in the 1980s*" (describing prudency evaluation as based on information known at the time of the decision to invest) http://ipu.msu.edu/wp-content/uploads/2016/12/Burns-Prudent-Investment-Test-84-16-85-1.pdf

and PB-2.2 See JJB-1 Liberty 1/24/2014 and 5/1/2014 updated Training Center Business Case.

Q. Please review the 1/24/2014 two page business case Liberty relied on to approve the Concord Training Center in early 2014.

A. The business case shows:

1. $1,028,100 estimated cost to build the training center. This was later updated to $1,053,100 on 5/1/2014;
2. National Grid Training facility in Millbury, MA is listed as the only alternative;
3. $400,000 annual estimated cost of using an outside agency for training;
4. "Simple ROI for the project has payback in less than 3 years" is the only financial assessment provided; and
5. "No risk foreseen if construction schedule is met" is the complete risk assessment.

The business case does not have supporting calculation schedules, does not include an analysis of forecast training needs, does not assess all risks, does not provide an analysis of factors that could mitigate risks, and does not adequately explain or analyze costs and forecasted return on investment (ROI). In summary the document lacks depth and does not exhibit the required level of analysis or contain necessary information to properly analyze the merits of building and running a dedicated training center compared to other training alternatives.

Regarding the assessment of risk, "No risk foreseen if construction schedule is met", this section of the business case analysis excludes the review of other risks (beyond a construction schedule delay), and excludes a discussion of risk mitigation. There is no discussion of steps, completed or planned, the Company performed, or would perform, in order to minimize the impact of risks on rate payers from risks. For example, was the risk of underestimating project costs identified and were steps taken to minimize this risk through prudent planning before deciding to build the facility?[7] And, would project management be prudent once the project was green lighted?[8] At what level would unmitigated risks, such as cost overruns, offset the economics of the project? Strategically, owning and operating a training center would require Liberty to build new areas of internal expertise and experience that did not exist in 2014. A dedicated facility would add new overhead fixed costs [9] that would be in addition to existing training costs (for example trainers, staff, supplies, support costs, supplies and support) that would continue into the future.[10] Essentially, Liberty was expanding beyond an electric and gas distribution company to also include training center business. Compounding these risks is the fact that parent APUC management and local Liberty management were struggling to resolve operational issues at both ENG and GSEC.[11] To some extent, these risks contributed toward 270 percent cost overruns, and prevented expected savings in overall training costs as expected.

[7] Final cost to build the training center was $3.8 million. Reference See JJB-3 OCA 4-26
[8] Project management of the Concord Training Center was outsourced to vendors See JJB-4 OCA 4-23
[9] OCA calculates a training center revenue requirement to exceed $800,000 annually.
[10] Liberty training costs, that are in addition to costs of owning the Concord Training Center, include two professional full time trainers. Reference JJB-5 Staff Tech 3-2
[11] Reference related Liberty dockets including DG 11-040, DG 14-180, DG 16-383

Regarding the analysis of $400,000 estimated external training costs, and the financial assessment of a 3 year payback, there is no supporting documentation of assumptions and calculations. The document does not provide explanation or rational for using simple payback method as a basis for this capital budgeting decision. In summary, the analysis of costs and ROI is unsupported while the business case assessment of risk is shortsighted, misleading, and lacking strategic insight.

Q. Did Liberty exercise prudent planning, capital budgeting, and decision making with the Concord Training Center?

A. No. For reasons stated above, and performance consistent with conclusions made in the 2016 Management Audit, the decision to build the Concord Training Center was imprudent and places the burden of those imprudently incurred costs on ratepayers through the instant docket's revenue requirement. Liberty's management of the Training Center project is accurately described as absentee management.

V: REVENUE REQUIREMENT

Q. Please summarize the impact of OCA's recommendations on EnergyNorth's proposed revenue requirement.

A. Table 2 incorporates the OCA's above-mentioned recommendations into an overall revenue requirement and compares it with EnergyNorth's requested revenue requirement. A narrative describing the overall revenue requirement follows the table, along with further tables and discussion detailing adjustments associated with Keene, the Concord Training Center, and, and the rate of return suggested by the OCA.

Table 2: Summary of Impact of OCA's Recommendations to EnergyNorth Operating Income and Revenue Deficiency

						1604: v11-23-17 Staff TS 1-1 Supplemental 17-048		
						Test Year	2016	
						Tax factor	1.65	
						OCA ROE	0.0840	
						OCA WACC	0.0641	
		col 1	col 2	col 3	col 4	col 5	col 6	col 7
		Company Request ENG	OCA Adjustment ENG	OCA proposed Adjusted ENG	Impact of OCA WACC Recommendation	OCA Recommendation (ENG division)	$ Total Adjustment (ENG division)	% (ENG division)
1	NOI Requirement	$ 18,398,298	$ (266,103)	$ 18,132,196	$ (2,339,638)	$ 15,792,558	$ (2,605,741)	-14.2%
2	NOI Present Rate	$ 9,961,580	$ 229,200	$ 10,190,780	$ -	$ 10,190,780	$ 229,200	2.3%
3	NOI Deficiency	$ 8,436,718	$ (495,303)	$ 7,941,416	$ (2,339,638)	$ 5,601,778	$ (2,834,941)	-33.6%
4	Revenue Deficien	$ 13,924,275	$ (817,466)	$ 13,106,809	$ (3,861,426)	$ 9,245,383	$ (4,678,892)	-33.6%

V.A Overall Revenue Requirement

Q. What revenue increase has Liberty requested?

A. The Company's 4/28/2017 petition requested recovery of an annual deficiency of $13,749,361 based on a consolidated rate base of $252,028,685 which represented an 11.21% increase in total operating revenues for EnergyNorth and Keene combined. The Company also requested approval for a step increase, concurrent with the permanent rate increase, to recover an annual revenue deficiency of $6,071,562 for EnergyNorth and Keene combined. (see Bates 009 and Bates 028).

In September 2017 the Company submitted updated revenue requirement schedules (Staff Tech 1-1). The updated consolidated revenue deficiency was $15,030,653 for EnergyNorth and Keene combined. In the week of November 20, 2017 the Company submitted Supplement Staff Tech 1-1 final revenue requirement schedules showing a consolidated revenue deficiency of $13,924,275 based on a consolidated rate base of $249,8991,998 which the OCA has used in its revenue requirement calculations.[12]

Q. When was the Company's current revenue requirement for distribution set?

A. The Company's last rate case was DG 14-180. Distribution rates were established in Order No. 25,797. *Liberty Utilities Corp.*, Order No. 25,797 (June 26, 2015).

Q. What is the breakdown of Liberty's updated $14,808,946 consolidated revenue deficiency?

A. The consolidated revenue deficiency of ENG and Keene is $14,808,946 as shown below in line 4 of Table 3 "Consolidating Revenue Requirements of Energy North and Keene.

Table 3: Consolidating Revenue Requirements of EnergyNorth and Keene - Including Rate Base Balances

				1604: v11-23-17 Staff TS 1-1 Supplemental 17-048		
		col 1		col 2		col 3
Line		Company Request ENG	+	Company Request Keene	=	Consolidated 1604 ENG +Keene
1	NOI Requirement	$ 18,398,298	+	$ 167,103	=	$ 18,565,401
2	NOI Present Rates	$ 9,961,580	+	$ (368,919)	=	$ 9,592,661
3	NOI Deficiency	$ 8,436,718	+	$ 536,022	=	$ 8,972,740
4	Revenue Deficiency	$ 13,924,275	+	$ 884,671	=	$ 14,808,946
5	Rate Base	$ 249,891,998	+	$ 2,269,649	=	$ 252,161,647

Q. What test year has the Company used in this request?

A. The Company's request is based on a 2016 test year.

Q. How did the Company calculate its consolidated revenue requirement?

[12] Note some OCA calculations may differ slightly from Company's calculations due to processing and rounding differences.

A. According to the Company, 2016 test year revenues were adjusted for flow through items, and adjusted for known and measurable items, which resulted in test year pro forma net operating income reflecting normalized revenues at current rates, expenses and net operating incomes for rate making purposes. My understanding is that this methodology was utilized for both Energy North and Keene.

Q. Did the OCA calculate a consolidated revenue requirement?

A. No, as stated earlier in my testimony, OCA has calculated a revenue requirement for Energy North only. Therefore our recommendation is not a consolidated revenue requirement and does not make a recommendation relative to Keene's revenue requirement.

Q. Please describe OCA's methodology for calculating revenue requirements in this docket.

A. Summary recommendations are presented in initial tables, which are supported with further tables containing details of adjustments. In conducting my analysis I first removed Keene's revenue requirements. Keene adjustments are discussed in the next part of my testimony. Second, I adjusted Energy North revenue requirement removing the Concord Training Center revenue requirements including rate base and operating expenses. Following these adjustments I calculated the impact of OCA's proposed return.

V.B Revenue Requirement Tables and Schedules

Keene Adjustments

Q. Please explain the purpose of the Keene adjustments.

A. As discussed earlier, the OCA is not reviewing or recommending a Keene revenue requirement in this docket. The purpose of the Keene adjustments is to remove Keene's requirement in order to allow a revenue requirement analysis exclusively focused on the Energy North proposed $13,924,275 revenue deficiency. Table 4 below shows the Company's revenue requirement proposal excluding Keene in column 3.

Table 4: Summary of NOI and Revenue Deficiency With and Without Keene

		1604: v11-23-17 Staff TS 1-1 Supplemental 17-048		
		col 1	col 2	col 3
		Consolidated 1604 ENG +Keene	OCA Adjustment remove Keene	Company Request ENG
1	NOI Requirement	$ 18,565,401	$ (167,103)	$ 18,398,298
2	NOI Present Rates	$ 9,592,661	$ 368,919	$ 9,961,580
3	NOI Deficiency	$ 8,972,740	$ (536,022)	$ 8,436,718
4	Revenue Deficiency	$ 14,808,946	$ (884,671)	$ 13,924,275

Q. What specific adjustments were made to remove Keene's revenue requirement?

A. Two sets of adjustments were made to remove Keene. Regarding rate base, Table 5 shows individual rate base components, and Table 6 shows the actual rate base balance being removed from the consolidated request. Regarding operating expenses, Table 7 shows individual expenses removed from the consolidated request.

Q. Please discuss Table 5 "Adjustment to Remove Keene from Revenue Requirement - Rate Base.

A. Table 5 "Adjustments to Remove Keene Revenue Requirement - Rate Base" shows the Keene related adjustments to the Company's consolidated rate base.

Table 5: Adjustment to Remove Keene Revenue Requirement - Rate Base

1604: v11-23-17 Staff TS 1-1 Supplemental 17-048					
	col 1	col 2		col 3	
Line	OCA Adjustment	Adjustment Amount		Company Proposal w Keene	
1	adj 2.1 Utility Plant (Keene RB)	$	(4,690,027)	$	474,281,599
2	adj 2.2 Accumulated Dep (Keene RB)	$	2,209,805	$	(156,574,775)
3	adj 2.3 Supplies (Keene RB)	$	(115,674)	$	6,948,817
4	adj 2.3a Cash Working Capital (Keene RB	$	(98,758)	$	2,750,118
5	adj 2.4 Prepayments (Keene RB)	$	(62,099)	$	2,767,078
6	adj 2.5 Audit Issuie (Keene RB)	$	(34,424)	$	34,424
7	adj 2.6 Deferred Inc Tax Cr (Keene RB)	$	473,107	$	(80,054,998)
8	adj 2.7 Customer Deposits (Keene RB)	$	48,421	$	(1,823,289)

Q. Please discuss Table 6 "Adjustment to Rate Base balance -Remove Keene".

A. Table 6, "Adjustment to Rate Base Balances - remove Keene", shows Keene's rate base of $2,181,474 being removed from the consolidated balance. The Energy North rate base balance, prior to OCA adjustment, is $249,891,998 shown in column.

Table 6: Adjustments to Rate Base Balance- Remove Keene

1604: v11-23-17 Staff TS 1-1 Supplemental 17-048							
		col 1		col 2		col 3	
Line		Consolidated 1604 ENG +Keene		OCA Adjustment remove Keene		Company Request ENG	
1	Rate Base	$	252,073,472	$	(2,181,474)	$	249,891,998

Q. Please discuss Table 7 "Adjustment to Remove Keene Revenue Requirement - Operations".

A. Table 7, "Adjustment to Remove Keene Revenue Requirement - Operations" column 2 shows adjustments to revenue, depreciation and O&M removing Keene operations from the revenue requirement.

Table 7: Adjustments to Remove Keene Revenue Requirement - Operations

1604: v11-23-17 Staff TS 1-1 Supplemental 17-048

	col 1	col 2		col 3	
Line	OCA Adjustment	Adjustment Amount		Company Proposal w Keene	
1	adj 2.8 O&M Gas (Keene)	$	25,461	$	(903,867)
2	adj 2.9 O&M Distribution (Keene)	$	(276,381)	$	12,815,613
3	adj 2.10 Customer Accounting (Keene)	$	(52,413)	$	6,161,305
4	adj 2.11 General Administrative (Keene)	$	(1,094,370)	$	12,823,203
5	adj 2.12 Depreciation (Keene)	$	(380,289)	$	19,337,592
6	adj 2.33 Other taxes (Keene)	$	(207,116)	$	11,145,837
7	adj 2.13 Fed Income Tax (Keene)	$	272,379	$	1,751,253
8	adj 3.1 Revenue Adjustment (Keene)	$	(1,343,810)	$	70,693,241

<u>**Concord Training Center Adjustments**</u>

Q. Please explain the purpose of the Concord Training Center adjustments being made to the ENG revenue requirement.

A. As discussed, the OCA's position is that the training center capital project was not prudently managed and is not appropriate for inclusion in Energy North's rate base or revenue requirements.

Q. What specific adjustments were made to remove the Concord Training Center revenue requirement?

A. Two sets of adjustments were made to remove the revenue requirement. Regarding rate base, Table 8 shows the net rate base reduction. Regarding operating expenses, Table 9 shows the training center expenses removed from the consolidated request.

Q. Please discuss Table 8 "Adjustment to Energy North - Rate Base".

A. Table 8 "Adjustments to Energy North - Rate Base" shows the Training Center related adjustments to the Company's consolidated rate base.

Table 8: Adjustment to EnergyNorth - Rate Base

1604: v11-23-17 Staff TS 1-1 Supplemental 17-048		
	col 1	col 2
Line	OCA Adjustment	Adjustment Amount
1	adj 1.1 Training Center Utiity Plant	$ (3,614,297)

Q. Please discuss Table 9 "Adjustment to Energy North – Operations".

A. Table 9 "Adjustments to Energy North - Operations" shows adjustments for depreciation and expenses associated with the Concord Training Center.

Table 9: Adjustments to EnergyNorth - Operations

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		col 2	col 3
Line	OCA Adjustment	Adjustment Amount	Company Proposal w Keene
1	adj 1.2 Training Center O&M	$ (71,700)	$ 12,815,613
2	adj 1.3 Training Center depreciation exp	$ (129,000)	$ 19,337,592
3	adj 1.4 Training Center other taxes	$ (28,500)	$ 11,145,837

Q. What is the impact on Energy North's revenue requirement based on the disallowance of the training center?

A. The disallowance of the training center reduces the revenue deficiency by $817,446. See Table 2 column 2.

Return and Rate Base Schedules

Q. Please discuss Table 10 "Capital Structure and Cost".

A. Table 10 "Capital Structure and Costs" summarizes the Company's capital structure and shows the cost of capital's impact on the company's required revenues based on the ROE recommendation of 8.4% by OCA witness Dr. Chattopadhyay, compared to 10.3% proposed by the Company. The OCA is recommending a 6.413% Weighted Average Cost of Capital (WACC) compared to the Company's proposed WACC of 7.363%. The Company's balance sheet reflects book value capital structure of 36.9% debt and 63.1% equity. Both the Company and the OCA use a theoretical weighting of 50% debt and 50% equity for calculating the WACC.

Table 10: Capital Structure and Costs

	col 1	col 2	col 3	col 4
Line		Annual Report	Consolidated 1604 ENG +Keene	OCA Recommendation (ENG division)
1	Debt	$ 90,000,000		
2	Equity	$ 153,649,425		
3			Theoretical	Theoretical
4	Debt Weighting	36.94%	50.00%	50.00%
5	Equity Weighting	63.06%	50.00%	50.00%
6	ROE		10.30%	8.40%
7	WACC after tax		7.363%	6.413%

Q. Please summarize all OCA rate base adjustments.

A. Table 11 Adjustments to Rate Base Balances – Consolidated" shows OCA's rate base adjustments.

Table 11: Adjustments to Rate Base Balances - Consolidated

1604: v11-23-17 Staff TS 1-1 Supplemental 17-048						
		col 1	col 2	col 3	col 4	col 5
Line		Consolidated 1604 ENG +Keene	OCA Adjustment remove Keene	Company Request ENG	OCA Adjustment ENG	OCA proposed Adjusted ENG
1	Rate Base	$ 252,161,647	$ (2,269,649)	$ 249,891,998	$ (3,614,297)	$ 246,277,701

Q. What is OCA's final revenue requirement recommendation?

A. The OCA recommends removal of all Keene revenue requirements and step increases, disallowance of the Concord Training Center, and an Energy North revenue deficiency no greater than $9,245,383.

Q. Does this conclude your testimony?

A. Yes.