May 12, 2017



## VIA ELECTRONIC FILING

Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, D.C. 20426

# Re: ISO New England Inc., Capital Budget Quarterly Filing for First Quarter of 2017; Docket No. ER17-\_\_\_\_-000

Dear Secretary Bose:

ISO New England Inc. (the "ISO" or "ISO-NE") hereby submits, pursuant to Section 205 of the Federal Power Act ("FPA"), Part 35 of the Rules and Regulations of the Federal Energy Regulatory Commission (the "Commission"), and the provisions of Section IV.B.6.2 of the ISO New England Inc. Transmission, Markets and Services Tariff (the "Tariff"),<sup>1</sup> the ISO's Capital Projects Report (the "Capital Projects Report") and schedule of the unamortized costs of the ISO's funded capital expenditures (the "Unamortized Costs Schedule") for the quarter ending March 31, 2017 (collectively, the "First Quarter 2017 Report"). The ISO respectfully requests that the Commission accept the First Quarter 2017 Report as filed, effective April 1, 2017.

## I. INTRODUCTION

Section IV.B.6.2 of the Tariff provides:

Consistent with the requirements imposed by the Commission in Docket No. ER02-2153, the ISO will file quarterly reports with the Commission specifying, by project, the ISO's prior year spending on multi-year projects, year to date spending and a forecast of the next calendar year spending. In addition, the ISO will file a schedule of the unamortized costs of the ISO's funded capital expenditures at the end of the quarter and the allocation of those costs to Schedules 1, 2 and 3. Such reports will be filed within forty-five (45) days at the end of each quarter and posted on the ISO's website. All quarterly capital budget and expenditure filings will be filed pursuant to, and subject to Commission review under, Section 205 of the Federal Power Act.

The Capital Projects Report and the Unamortized Cost Schedule for the quarter ending March 31, 2017 are attached hereto. The Unamortized Cost Schedule sets forth the allocation of the costs to Schedules 1, 2, and 3 of Tariff Section IV.A, should such collection prove necessary.

<sup>&</sup>lt;sup>1</sup> Capitalized terms used but not otherwise defined in this filing have the meanings ascribed thereto in the Tariff.

#### II. DISCUSSION OF THE FIRST QUARTER REPORT

The ISO's forecasted annual capital budget, accepted by the Commission for 2017 at \$28.0 million,<sup>2</sup> cannot predict with perfect accuracy the exact manner in which the ISO would incur capital expenditures. The ISO's quarterly filings keep stakeholders and the Commission apprised of adjustments; accordingly, the First Quarter 2017 Report provides actual capital expenditures incurred by the ISO through 2016 on multi-year capital projects, year-to-date spending during 2017, forecasts for capital projects for the remainder of 2017, and forecasted future amounts for projects that extend beyond 2017.

The following discussion highlights significant changes from the last quarterly report. Specifically, below, the ISO describes any (i) newly-chartered<sup>3</sup> capital projects, (ii) projects completed during the quarter, and (iii) projects with significant budget changes compared with the last quarterly report. Finally, the discussion below includes a review of unchartered projects and non-project capital expenses.

The ISO vetted the changes discussed herein through the stakeholder process by posting a draft of this filing letter (with attachments) on its website on May 5, 2017. The ISO also discussed the contents of the filing letter and attachments at the May 12, 2017 meeting of the NEPOOL Budget & Finance Subcommittee.

## A. New Projects with Approved Charters<sup>4</sup>

#### **1.** Forward Capacity Market – Pay For Performance (\$2,493,400)

The Pay for Performance ("PFP") design improves the current Forward Capacity Market ("FCM") design by including stronger links between a supply resource's capacity revenues and such resource's performance during reserve deficiencies, providing strong incentives for each resource to perform as needed and to make the required investments to build and maintain the resources necessary to assure reliable service. The Commission has accepted the PFP design, which will become effective in June, 2018.

The FCM PFP project will require modifications to several existing software applications. Significant effort will be dedicated to modifying the Gateway Data Management Application ("GDMA"). Market Database Application Programming interfaces will be enhanced to provide Capacity Scarcity Conditions, unit specific "capping" for transmission limitations, Desired Dispatch Point, External Reserve Support, and Replacement Reserve MW to the ISO Gateway for eventual use in settlement, in addition to enhancements to the current Forward Capacity Tracking System. The current FCM Supplemental Availability Bilateral mechanism does not contain the needed functionality or nomenclature to accommodate PFP and will be retired effective with the start of the ninth Capacity Commitment Period, commensurate

<sup>&</sup>lt;sup>2</sup> See Commission letter order issued to ISO New England Inc. in Docket No. ER17-116-000 (December 6, 2016).

<sup>&</sup>lt;sup>3</sup> All capital projects, prior to approval, must have a completed project charter. This charter documents the project's goals and objectives, schedule and milestones, and budget. Before approving a new capital project, the ISO's senior management team reviews each project charter.

<sup>&</sup>lt;sup>4</sup> Amounts shown in parentheses represent total project costs.

Honorable Kimberly D. Bose May 12, 2017 Page 3 of 8

with PFP implementation. This mechanism will be replaced with the Capacity Performance Bilateral function to accommodate PFP functionality and nomenclature, and the Financial Assurance Management application will be updated to account for the possibility of net payment obligations for commercial resources also consistent with the PFP construct.

The targeted completion date for this project is June, 2018.

#### 2. Situational Awareness – Video Wall Expansion Phase II (\$984,000)

The Situational Awareness – Video Wall Expansion project will expand ISO-NE's control room wallboards at the Main Control Center and the Backup Control Center to improve the operators' overall minute-by-minute awareness of the transmission system and to provide needed information in a concise and straightforward manner on a larger monitoring display. Existing side video walls will be replaced with sixteen 55" LCD screens on both sides of the main wall board and twenty three new situational awareness displays will be developed and deployed on these new video walls. Enhanced situational awareness will improve the operators' ability to identify system abnormalities and take necessary preventive and corrective actions resulting in increased reliability of the transmission system.

Phase I of the project occurred in 2016 and procured the necessary hardware to build the video walls including the 55" LCD monitors, video wall processors, and other ancillary hardware. Phase II of the project will include the installation of the LCD monitors, configuring the video wall processors, and the development of situational awareness displays to be displayed on the LCD screens.

The targeted completion date for this project is November, 2017.

#### **3.** Balance of Planning Period – Financial Assurance (\$800,200)

ISO-NE and New England stakeholders have been working to develop a third-party Financial Transmission Rights ("FTR") auction-clearing mechanism that would address the financial assurance issues associated with long-term financial transmission rights. However, significant issues have arisen concerning the viability of the third-party clearing approach. Instead, the ISO has decided to focus on implementing monthly reconfiguration auctions (i.e., balance of planning period or "BoPP" auctions) for FTRs.<sup>5</sup>

The BoPP – Financial Assurance project will implement monthly reconfiguration auctions and augment the current FTR financial assurance methodology by migrating changes to the auction software along with a new financial assurance design. The project will necessitate changes to the Financial Transmission Rights auction software, Market Operator Interface, and Financial Assurance User Interface. It will also require data model changes, reporting changes, and regression testing of all the systems impacted by these changes.

The targeted completion date for this project is September, 2017.

<sup>&</sup>lt;sup>5</sup> See ISO New England, Changes to Financial Assurance Policy, Docket No. ER17-1441-000 (filed April 20, 2017).

# 4. Streamlining Asset Registration – Relationship Management (\$240,000)

ISO-NE's current asset registration process is manual and relies on Market Participant submittal of scanned, emailed, and/or faxed asset registration information. As part of this manual submittal process, ISO-NE's generator and load management team must confirm that appropriate entities are submitting and/or approving requested changes. For data changes, approval may be required by other Market Participants or other ISO-NE business units depending on the requested data changes. Additionally, any data submitted is not visible to the Market Participants until the issuance of the non-hourly bills since they cannot review their asset data residing in ISO-NE's systems.

The Streamlining Asset Registration – Relationship Management project will alleviate these concerns by moving the management of asset relationship functionality from the Settlements Market System to the Customer Asset Management System, making it visible to Market Participants. This will enhance the current process which is cumbersome and time consuming.

The targeted completion date for this project is July, 2017.

#### **B.** Capital Projects Completed in Current Quarter

## 1. Sub-Hourly Settlements

The Sub-Hourly Settlements project was placed into service in March, 2017 with a total project cost of \$4,127,600, on target with planned costs of \$4,206,900.

#### 2. Real-Time Fast-Start Pricing

The Real-Time Fast-Start Pricing project was placed into service in March, 2017 with a total project cost of \$4,056,100, on target with planned costs of \$4,034,100.

#### 3. Forward Capacity Auction ("FCA") 11

The FCA 11 project was placed into service in March, 2017 with a total project cost of \$2,385,100, on target with planned costs of \$2,421,700.

#### 4. Market Enhancements for Dispatchable Asset Related Demand Pumps

The Market Enhancements for Dispatchable Asset Related Demand Pumps project was placed into service in March, 2017 with a total project cost of \$1,569,600, \$199,300 lower than planned costs of \$1,768,900. The project was tested and placed into service with no significant issues arising which resulted in lower costs.

# 5. 2015 Market System Corrective Action Preventative Action's ("CAPA's")

The 2015 Market System CAPA's project was placed into service in March, 2017 with a total project cost of \$910,000, on target with planned costs of \$930,000.

#### 6. Interconnection Request Tracking Tool ("IRTT") Elective Transmission Upgrade

The IRTT Elective Transmission Upgrade project was placed into service in March, 2017 with a total project cost of \$116,100, on target with planned costs of \$113,100.

#### C. Projects with Significant Changes

# 1. Energy Management Platform 3.1 Upgrade and Customs Reductions (2017 budget decrease of \$760,000, with total project costs of \$280,300)

ISO-NE's Energy Management System is based on the General Electric ("GE") suite of Energy Management Platform ("EMP") applications. GE has released the new version of the EMP, version 3.1. In order for GE to provide EMP support, ISO-NE must upgrade to version 3.1 before 2020.

ISO-NE has made certain customizations to the EMP software and, as a result, the upgrade will require significant effort to port these customizations to the upgraded software. Due to resource limitations, the majority of this project is being shifted into 2018 and beyond.

# 2. nGem Software Development (2017 Budget increase of \$700,000 for total 2017 project planning of \$700,000)

GE is working to develop the next generation Market Management System ("nGem") which redesigns/upgrades the current market management system. This redesign consists of replacing the file-based data transfer mechanism between the market database and the market clearing engines with network-based data transfer technology; elimination of Habitat as a platform to run the Simultaneous Feasibility Test application; and changes to or replacement of other software elements including, pricing dispatch related applications, day-ahead and real-time market clearing engines, and new bidding micro services for eMarket.

This project is estimated to extend over two years with deliverables to be completed in two phases. Phase I delivery includes enhanced data transfer technology and the elimination of the Habitat platform. Phase II delivery will include Day-Ahead market clearing engine enhancements, bidding micro services, and Real-Time market clearing engine replacements. This project is anticipated to be chartered in the third quarter of 2017.

#### 3. CIMNET Simultaneous Feasibility Test w/Data Transfer Enhancements (2017 Budget increase of \$400,000, for total 2017 project planning of \$400,000)

The CIMNET Simultaneous Feasibility Test w/Data Transfer Enhancements project deploys into production the upgraded software that will be developed as part of Phase I of the nGEM Software Development project described above. The scope of this project includes integration and customization of GE's upgraded software into ISO-NE's system. Once implemented, benefits will include improved performance, the elimination of reliance on CSV flat files for communication of data to/from the market clearing engines, and reduced efforts to deploy security patches because of the elimination of the Habitat platform.

## D. Capital Projects in Planning/Conceptual Design

Capital project priorities in the planning and conceptual design phase are fluid. The Capital Projects Report includes the ISO's current best estimate as to how it will spend capital funds. The estimates for projects in Planning/Conceptual Design are high level/low confidence. When the project scope, timeline, budget, and benefits are determined, these figures will be updated and communicated to stakeholders and the Commission through future quarterly reports.

#### E. Non-Project Capital Expenses

Non-project capital expenditures fund furniture and fixtures, non-project related hardware and software purchases, and the internal capitalized labor necessary to code System Improvement Requests, also known as "SIRs." The SIRs are generally a result of requests from Market Participants and the ISO's operational groups to improve system functionalities.

The ISO's non-project capital spending for the 2017 Budget has decreased \$505,000 from an original 2017 Budget estimate of \$4,100,000 to \$3,595,000. This decrease reflects an adjustment based on lower expected requirements for hardware/software expenditures. The \$505,000 was moved to the ISO's emerging work allowance for reallocation as needed.

#### III. ADDITIONAL SUPPORTING INFORMATION

The ISO submits the following additional information pursuant to Sections 205 of the FPA and 35.13 of the Code of Federal Regulations:

35.13(b)(1) – In addition to this transmittal letter, the ISO provides the following materials:

- for the First Quarter ending March 31, 2017, the Capital Projects Report and the Unamortized Costs Schedule (Attachment 1); and
- a list of the governors and electric utility and other regulatory agencies for the six New England states that comprise the New England Control Area and the New England Conference of Public Utility Commissioners, Inc. (Attachment 2).

Honorable Kimberly D. Bose May 12, 2017 Page 7 of 8

<u>35.13(b) (2)</u> – The ISO requests that the Commission accept the First Quarter 2017 Report as filed, effective April 1, 2017. Since the information in the First Quarter 2017 Report involves the period ending March 31, 2017, a waiver of the 60-day prior notice requirements is appropriate, as is the requested effective date. That effective date will also avoid any issue regarding a potential lag in the "backstopping" accomplished through the ISO's capital budget quarterly reports.

35.13(b)(3) – An electronic copy of this filing is being provided to all NEPOOL Participants and to the governors and electric utility and other regulatory agencies for the six New England states that comprise the New England Control Area, and to the New England Conference of Public Utility Commissioners, Inc. The names and addresses of these governors and regulatory agencies are shown in Attachment 2. In accordance with Commission rules and practice, there is no need for entities identified on Attachment 2 to be included on the Commission's official service list in the captioned docket unless such entities become interveners in this docket.

35.13(b)(4) – A description of the materials submitted pursuant to this filing is contained in this transmittal letter.

35.13(b)(5) – This transmittal letter and supporting materials provide a statement of the reasons the First Quarter 2017 Report should be accepted by the Commission.

<u>35.13(b)(6)</u> – The ISO's approval of these changes is evidenced by this filing. The ISO also notes that the NEPOOL Budget and Finance Subcommittee reviewed this filing and the 2017 Capital Budget, and the NEPOOL Participants Committee voted to support the 2017 Capital Budget.

35.13(b)(7) – The ISO does not have any knowledge of any relevant expenses or costs of service that have been alleged or judged in any administrative or judicial proceeding to be illegal, duplicative, or unnecessary costs that are demonstrably the product of discriminatory employment practices.

35.13(c)(1) – Sales, services, and revenues cannot reasonably be projected at this time.

35.13(c)(2) – There is no other rate schedule on file for which a comparison of charges would be appropriate.

35.13(c)(3) – No specifically assignable facilities have been or will be installed or modified in order for the Commission to accept this filing.

Honorable Kimberly D. Bose May 12, 2017 Page 8 of 8

#### **IV. COMMUNICATIONS**

Correspondence and communications regarding this filing should be addressed to:

Jennifer M. Recht Corporate Counsel ISO New England Inc. One Sullivan Road Holyoke, MA 01040-2841 Tel: (413) 540-4479 Fax: (413) 535-4379 E-mail: jrecht@iso-ne.com

## V. CONCLUSION

For the reasons stated herein, the ISO requests that the Commission accept the First Quarter 2017 Report as filed, effective April 1, 2017.

Respectfully submitted,

<u>/s/ Jennifer M. Recht</u> Jennifer M. Recht Corporate Counsel ISO New England Inc.

# Attachment 1

#### ISO New England Inc. Capital Projects Schedule For the Quarter ended 3/31/17

<u>(\$000's)</u>

Description	Prior Year(s) Spending [1]	2017 YTD Spending		Future Cost to Complete	Total Project Costs [2]
Capital Projects - Approved Charters					
. Sub-Hourly Settlements	3,553.9	573.7	-	-	4,127.6
. Real-Time Fast-Start Pricing	3,729.1	315.2	11.8	-	4,056.1
. Forward Capacity Market - Pay for Performance	153.4	120.2	1,564.8	655.0	2,493.4
. Forward Capacity Auction (FCA) 11	2,074.2	310.9	-	-	2,385.1
. Market Enhancements for Dispatchable Asset Related Demand Pumps (3)	1,433.8	135.8	-	-	1,569.6
. Situational Awareness - Video Wall Expansion Phase II	-	169.6	814.4	-	984.0
. 2015 Market System Corrective Action Preventative Action (CAPA)'s	891.0	6.8	12.2	-	910.0
. 2017 Issue Resolution Phase I	-	383.7	456.3	-	840.0
. Balance of Planning Period - Financial Assurance	28.9	106.1	665.2	-	800.2
. IT Asset Workflow	274.5	117.8	402.2	-	794.5
. Zonal Load Forecast	186.7	134.5	322.6	-	643.8
. Case Snapshot Market Operator Interface [4]	-	42.8	576.8	-	619.6
. Cyber Security Network Segmentation Phase II	146.6	71.7	346.7	-	565.0
. Asset Characteristic Database Re-Design	178.3	153.7	217.3	-	549.3
. Update Enhanced Energy Scheduling Technical Architecture	162.7	55.4	281.9	-	500.0
. Corporate Performance Management and Budget Forecast System	139.0	116.5	129.5	-	385.0
. Power System Modeling Management Initiatives	185.4	56.0	109.0	-	350.4
. Synchrophasor Initiatives (5)	306.3	8.3	1.7	-	316.3
. Streamlining Asset Registration - Relationship Management	-	25.2	214.8	-	240.0
. 2016 Market System Corrective Action Preventative Action (CAPA)'s	160.0	60.7	17.8	-	238.5
. Baseline Methodology Modification	8.4	26.8	149.8	-	185.0
. Energy Management System (EMS) Alarm Presentation Enhancements	64.4	47.4	17.6	-	129.4
. Interconnection Request Tracking Tool (IRTT) Elective Transmission Upgrade	111.0	5.1	-	-	116.1
. Projects Less Than \$100K in Value (Four Projects)	43.9	40.5	6.9	-	91.3
Sub Total Projects with Approved Charters	13,831.5	3,084.2	6,319.5	655.0	23,890.2

#### ISO New England Inc. Capital Projects Schedule For the Quarter ended 3/31/17

<u>(\$000's)</u>

Description	Prior Year(s) Spending [1]	2017 YTD Spending		Future Cost to Complete	Total Project Costs [2]
Capital Projects in Planning/Conceptual Design [6]					
. Long-Term FTRs [7]	907.5	-	-	-	907.5
. Price Responsive Demand	591.2	1,345.7	2,654.3	-	4,591.2
. Forward Capacity Auction (FCA) 12	-	-	2,000.0	-	2,000.0
. Internal Market Monitoring Data Needs	175.9	71.8	1,428.2	-	1,675.9
. nGEM software development	-	-	700.0	-	700.0
. 2017 Issue Resolution Phase II	-	-	600.0	-	600.0
. Forward Capacity Tracking System Technical Architecture Upgrade	76.8	-	500.0	-	576.8
. Storage Device Alternatives	15.0	1.6	498.4	-	515.0
. Operations Document Management System	-	-	500.0	-	500.0
. CIMNET Simultaneous Feasibility Test w/Data Transfer Enhancements	61.1	-	400.0	-	461.1
. Transmart Technical Architecture Update	22.7	25.7	374.3	-	422.7
. Energy Management Platform 3.1 Upgrade and Customs Reduction	40.3	35.3	204.7	-	280.3
. Cognitive Computing Pilot Project for Outage Coordination	149.0	70.5	-	-	219.5
. Identity and Access Management	2.5	97.0	125.5	-	225.0
. Enterprise Application Integration	-	2.0	158.1	-	160.0
. Projects Less Than \$100K in Value (Four Projects)	28.8	23.3	161.5	-	213.6
. Other Emerging Work Projects	-	-	2,523.5	-	2,523.5
Sub Total Capital Projects Planning/ Conceptual Design	2,070.7	1,672.9	12,828.4	-	16,572.0
Non-Project Capital Spending	-	597.6	2,997.4	-	3,595.0
Capitalized Interest & Loan Fees		130.4	369.6	-	500.0
Total Capital Projects	15,902.2	5,485.0	22,515.0	655.0	44,557.2

- [1] Prior Year(s) spending reflects only those projects with current and future spending.
- [2] Total project costs include external and internal labor capital costs.
- [3] The Market Enhancements for Dispatchable Asset Related Demand Pumps project was formerly known as Expand Energy Offers for Pumps
- [4] The total approved budget for the Case Snapshot Market Operator Interface project is \$947,100, however \$327,500 of FERC approved funds bring the net budgeted cost to \$619,600.
- [5] The Synchrophasor Initiatives project was formerly known as Phasor Measurement Unit Data Application
- [6] All estimates are subject to material change until rules are finalized, approved by FERC, scope is defined and project chartered.
- [7] The Long-Term FTRs project has been indefinitely deferred pending the development of appropriate credit requirements.

#### ISO NEW ENGLAND INC.

#### FERC COMPLIANCE FILING - 03/31/2017

#### ALLOCATION ON UNRECOVERED PLANT IN SERVICE/UNAMORTIZED COST OF PLANT

Line			Unrecovered Basis						Self-Funding Tariff					
No.	Description		Total	Adj	ustments		Adj. Total				Schedule 2	Schedule 3		
	(a) 2017 Items:		(b)		(c)		(d)	(e)	(f)	(g)	(h)	(i)		
1 2	Building Improvements	\$	_	\$		\$		\$	- \$	- \$	- \$			
2	Furniture, Fixtures, and Equipment	\$	-	φ	-	φ		φ	- \$	- \$	- 3	-		
4	Non-Project Capital Spending (Hardware and Software)	\$	56,067		-		56,067		56,067 \$	12,082 \$	29,014 \$			
5	Market Systems and Enhancement Projects	\$	6,001,114		-		6,001,114		6,001,114 \$	804,165 \$	3,450,379 \$			
6	Non-Market Systems and Enhancement Projects	\$	983,130		-		983,130		983,130 \$	216,792 \$	453,261 \$			
7	Total 2017 Items - \$	\$	7,040,311	\$	-	\$	7,040,311	\$	7,040,311 \$		3,932,655 \$			
8	Total 2017 Items - %								100.00%	14.67%	55.86%	29.47%		
9	2016 Items:													
10	Building Improvements	\$	297,488	\$	-	\$	297,488	\$	297,488 \$	64,109 \$	153,950 \$			
11	Furniture, Fixtures, and Equipment		3,714		-		3,714		3,714	800	1,922	992		
12	Non-Project Capital Spending (Hardware and Software)		2,781,373		-		2,781,373		2,781,373	599,386	1,439,361	742,627		
13	Market Systems and Enhancement Projects		16,677,534		-		16,677,534		16,677,534	2,409,153	9,878,676	4,389,704		
14	Non-Market Systems and Enhancement Projects		2,733,817		-		2,733,817		2,733,817	1,002,264	1,001,472	730,081		
15	Total 2016 Items - \$	\$	22,493,926	\$	-	\$	22,493,926	\$	22,493,926 \$		12,475,381 \$			
16	Total 2016 Items - %								100.00%	18.12%	55.46%	26.42%		
17	2015 Items:	•	07.000	¢		¢	27.000	\$	07.000	0.440	40.404	40.050		
18	Building Improvements	\$	37,663	\$	-	\$	37,663	\$	37,663 \$	8,116 \$	19,491 \$			
19	Furniture, Fixtures, and Equipment		153,519		-		153,519		153,519	33,083	79,446	40,990		
20	Non-Project Capital Spending (Hardware and Software)		1,149,423		-		1,149,423		1,149,423	247,701	594,827	306,896		
21 22	Market Systems and Enhancement Projects		11,611,648		-		11,611,648		11,611,648	3,080,903	5,152,489	3,378,257 721,740		
22	Non-Market Systems and Enhancement Projects Total 2015 Items - \$	¢	3,677,859 16,630,113	\$	-	\$	3,677,859 16,630,113	\$	3,677,859 16,630,113 \$	1,140,507 4,510,310 \$	1,815,613 7,661,865 \$			
23 24	Total 2015 Items - %	Ф	16,630,113	Ф	-	Ф	16,630,113	Þ	100.00%	4,510,310 \$ 27.12%	46.07%	4,457,938 26.81%		
24 25	2014 Items:								100.00 %	21.12/0	40.07 %	20.01/0		
25 26	Building Improvements	\$	97,820	\$		\$	97,820	\$	97,820 \$	21,080 \$	50,622 \$	26,118		
20	Back-up Control Center	φ	1,632,888	φ	-	φ	1,632,888	φ	1,632,888	351,887	845,019	435,981		
28	Furniture, Fixtures, and Equipment		131,639		-		131,639		131,639	28,368	68,123	35,148		
29	Non-Project Capital Spending (Hardware and Software)		1,939,751				1,939,751		1,939,751	418,016	1,003,821	517,913		
30	Market Systems and Enhancement Projects		5,782,472		-		5,782,472		5,782,472	2,023,470	1,890,672	1,868,330		
31	Non-Market Systems and Enhancement Projects		1,508,062				1,508,062		1,508,062	789,594	368,352	350,117		
32	Total 2014 Items - \$	\$	11,092,632	\$		\$	11.092.632	\$	11,092,632 \$	3,632,416 \$	4,226,609 \$			
33	Total 2014 Items - %	Ψ	11,052,052	Ψ		Ψ	11,002,002	Ψ	100.00%	32.75%	38.10%	29.15%		
34	2013 Items:								10010070	02.1070	0011070	20.1070		
35	Building Improvements	\$	64,670	\$	-	\$	64,670	\$	64,670 \$	13,936 \$	33,467 \$	17,267		
36	Back-up Control Center	Ŷ	18.196.873	Ŷ	-	Ŷ	18.196.873	Ŷ	18.196.873	3.921.426	9.416.882	4,858,565		
37	Furniture, Fixtures, and Equipment		570,647		-		570,647		570,647	122,974	295,310	152,363		
38	Non-Project Capital Spending (Hardware and Software)		1,906,443		-		1,906,443		1,906,443	410,839	986,584	509,020		
39	Market Systems and Enhancement Projects		2,065,983		-		2,065,983		2,065,983	805,446	647,040	613,497		
40	Non-Market Systems and Enhancement Projects		984,900		-		984,900		984,900	282,526	459,600	242,774		
41	Total 2013 Items - \$	\$	23,789,516	\$	-	\$	23,789,516	\$	23,789,516 \$	5,557,148 \$	11,838,882 \$	6,393,486		
42	Total 2013 Items - %								100.00%	23.36%	49.77%	26.88%		
43														
44	2012 Items:													
45	Building Improvements	\$	69,454	\$	-	\$	69,454	\$	69,454 \$	14,967 \$	35,942 \$			
46	Back-up Control Center		1,707,339		-		1,707,339		1,707,339	367,932	883,548	455,859		
47	Furniture, Fixtures, and Equipment		3,273		-		3,273		3,273	705	1,694	874		
48	Non-Project Capital Spending (Hardware and Software)		404,369		-		404,369		404,369	87,141	209,261	107,966		
49	Market Systems and Enhancement Projects		763,052		-		763,052		763,052	378,696	313,291	71,065		
50	Non-Market Systems and Enhancement Projects		187,730	•	-	*	187,730		187,730	40,456	97,151	50,124		
51	Total 2012 Items - \$	\$	3,135,217	\$	-	\$	3,135,217	\$	3,135,217 \$	889,897 \$	1,540,886 \$			
52 ວຽ	Total 2012 Items - %								100.00%	28.38%	49.15%	22.47%		
54	2011 Items:													
55	Facilities Project	\$	58,454	\$	-	\$	58,454	\$	58,454 \$	12,597 \$	30,250 \$	15,607		
56	Furniture, Fixtures, and Equipment	Ŷ	5,862	Ŧ		Ŷ	5,862	Ψ	5,862	1,263	3,034	1,565		
57	Market Systems and Enhancement Projects		73		-		73		73	37	37	-		
58	Non-Market Systems and Enhancement Projects		32,316		-		32,316		32,316	6,964	16,723	8,628		
59	Total 2011 Items - \$	\$	96,705	\$	-	\$	96,705	\$	96,705 \$	20,861 \$	50,044 \$			
60	Total 2011 Items - %	Ť	,	•		·	,	•	100.00%	21.57%	51.75%	26.68%		

#### ISO NEW ENGLAND INC.

#### FERC COMPLIANCE FILING - 03/31/2017

#### ALLOCATION ON UNRECOVERED PLANT IN SERVICE/UNAMORTIZED COST OF PLANT

Line			U	Inrec	overed Bas	is			Self-Funding Tariff							
No.	Description		Total	Adjustments		Adj. Total			Total	S	chedule 1	Schedule 2		Schedule 3		
	(a)	(b)		(c)			(d)	(e)	(f)		(g)		(h)	(i)		
61																
62	2010 Items:	-	04.004			•	04.004		04.004	•	4 5 40	•	10.010	¢ г.000		
63	Facilities Project	\$	21,081	\$	-	\$	21,081		\$ 21,081	\$	4,543	\$	10,910			
64 65	Furniture, Fixtures, and Equipment Total 2010 Items - \$	<u>_</u>	687 21.768	\$		\$	687 21.768	-	687 6 21.768	\$	148 4.691	¢	355 11.265	183 \$ 5.812		
66 66	Total 2010 Items - %	Ф	21,768	Ф	-	Ф	21,768		100.00%	Ф	21.55%	Ф	51.75%	\$ 5,812 26.70%		
67								_	100.0078		21.5578		51.7576	20.7078		
68	2009 Items:															
69	Facilities Project	\$	19,066	\$	-	\$	19,066	ç	19.066	\$	4.109	\$	9,867	\$ 5,091		
70	Non-Project Capital Spending (Hardware and Software)	Ψ	729	Ψ	-	Ψ	729		729	Ψ	157	Ψ	377	¢ 0,001 195		
71	Total 2009 Items - \$	\$		\$	-	\$	19,795			\$	4,266	\$	10,244			
72	Total 2009 Items - %	Ŷ	10,100	Ψ		Ŷ	.0,.00		100.00%	Ŷ	21.55%	Ŷ	51.75%	26.70%		
73								-								
74	2008 Items:															
75	Facilities Project	\$	30,957	\$	-	\$	30,957	5	30,957	\$	6,671	\$	16,020	\$ 8,266		
76	Non-Market Systems and Enhancement Projects		209,718		-		209,718		209,718		45,194		108,529	55,995		
77	Total 2008 Items - \$	\$	240,676	\$	-	\$	240,676		\$ 240,676	\$	51,866	\$	124,550	\$ 64,260		
78	Total 2008 Items - %							_	100.00%		21.55%		51.75%	26.70%		
79																
80	2007 Items:															
81	Facilities Project	\$	2,328,672	\$	-	\$	2,328,672	5	\$ 2,328,672	\$	501,829	\$	1,205,088	\$ 621,755		
82	Non-Market Systems and Enhancement Projects		940,886		-		940,886		940,886		202,761		486,909	251,217		
83	Total 2007 Items - \$	\$	3,269,558	\$	-	\$	3,269,558			\$	704,590	\$		\$ 872,972		
84	Total 2007 Items - %								100.00%		21.55%		51.75%	26.70%		
85								_								
86	2006 Items:															
87	Facilities Project	\$	8,247,815	\$	-	\$	8,247,815				1,777,404		4,268,244			
88	Total 2006 Items - \$	\$	8,247,815	\$	-	\$	8,247,815			\$	1,777,404	\$		\$ 2,202,167		
89	Total 2006 Items - %							_	100.00%		21.55%		51.75%	26.70%		
90																
91	2005 Items:	_		_												
92	Building/property improv. (Renov. workspace, network & voice rewiring)	\$	10,949,407	\$	-	\$	10,949,407		<b>10,949,407</b>	\$	2,359,597	\$	5,666,318			
93	Capital Interest/Fees	_	207,141	•	-	<u> </u>	207,141	_	207,141		-	<u>^</u>	135,677	71,464		
94	Total 2005 Items - \$ Total 2005 Items - %	\$	11,156,547	\$	-	\$	11,156,547		11,156,547 100.00%	\$	2,359,597 21,15%	\$	5,801,995 52.01%	\$ 2,994,955		
95	10tal 2005 Items - %							_	100.00%		21.15%		52.01%	26.84%		
96 97	2004 Items:															
97 98	Building/property improv. (Renov. workspace, network & voice rewiring)	\$	590,880	\$		\$	590,880		590,880	¢	127,335	¢	305,780	\$ 157,765		
98 99	Capital Interest/Fees	Φ	590,880 20,557	Φ	-	Φ	20,557	:	20,557	Φ	121,335	φ	305,780 13,465	\$ 157,765 7,092		
99 100	Total 2004 Items - \$	\$	611.437	¢		\$	611.437		611,437	¢	- 127,335	¢	319.245			
100	Total 2004 Items - %	φ	011,437	φ	-	φ	011,437		100.00%	φ	20.83%	Ψ	52.21%	a 164,857 26.96%		
101								=	100.0078		20.0078		52.2170	20.3078		
102	Total Unrecovered Plant in Service - \$	\$	107,846,017	\$	-	\$	107,846,017	ç	107,846,017	\$	24,749,131	\$ '	53,953,861	\$ 29,143,024		
103		Ψ		Ψ		Ψ	,010,017	,	100.00%	Ψ		Ψ `	50.03%	27.02%		
		\$	107,846,017	\$	-	\$	107,846,017			\$	24,749,131 22.95%	φ :				

Attachment 2

#### Connecticut

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