

ISO New England Proposed 2016 Operating and Capital Budgets



*NEPOOL Budget & Finance Subcommittee
Meeting*

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INTRODUCTION AND OVERVIEW

Background: Internal Development

The budget was developed through a seven-step process:

1. Define objectives, activities, and goals for 2016.
2. Identify efficiencies for each department.
3. Determine resource requirements.
4. Develop budget estimates for each department.
5. Adjust budgets to ensure that staff resources and activities are aligned with business plan.
6. Conduct Senior Staff review to ensure alignment of budget with business plan and overall fiscal constraint.
7. Develop priorities.



Background: Discussion with Stakeholders and State Agencies

- At both the June 7, 2015 meeting with the New England Conference of Public Utilities Commissioners (NECPUC), and the June 22, 2015 NEPOOL Summer Meeting, management presented and reviewed the preliminary operating and capital budgets for 2016.
- The proposed budget in this presentation is in line, overall, with the services and funding included in the preliminary budget presented in June.

Note: Throughout the presentation some schedules may be inconsistent due to rounding.



Overview of 2016 Operating Budget

- The 2016 budget includes funding to execute on prior decisions/orders:
 - Our focus will be the execution of decisions already made to support existing services (i.e., increasing Cyber Security threats, Market Monitoring workload driven by the Forward Capacity Market (FCM) and the enhancement of data gathering, analysis tools and capabilities, and other FCM Reforms and changes).
- The 2016 operating budget includes adjustments to the previous year's budget as follows:
 - Cost reductions from previous year's budget (e.g., one time studies, non-recurring costs, other efficiencies).
 - Increases to fund committed costs (e.g., Cyber Security Costs, Market Monitoring, Computer Services, Forward Capacity Market Reforms, Medical and Defined Contribution plans and benefit costs, and NERC/NPCC Fees).
 - Reallocation of resources for 2016 priorities and work and other miscellaneous increases.
 - Costs of maintaining competitive compensation.
 - Proposed budget includes a 3.0% merit increase, with 0.5% for equity and promotional increases.
 - See slides 46 to 61 for further information.

Overview of 2016 Operating Budget *(cont.)*

- The proposed operating budget, including depreciation, excluding the true-up for past years, represents an increase of 3.9% (or \$7.0 million) over the 2015 budget.
- The presentation provides information regarding ISO-NE's proposed 2016 Operating Budget, including:
 - Additional resource needs to support previously committed work including:
 - Cyber Security.
 - Market Monitoring.
 - Forward Capacity Market.
 - Compensation/benefits increases.
 - Reallocation of resources for 2016 priorities and work and other miscellaneous increases.
 - On-going support/inflationary increases.
 - Mandated regulatory increases (NERC/NPCC).
 - Efficiencies and reductions.
- The final 2016 Operating and Capital budgets, including resourcing, will reflect the results of the ongoing priorities and work plan discussions with stakeholders.

Overview of 2016 Operating Budget *(cont.)*

- In total the 2016 estimated revenue requirement is a 9.6% increase over 2015, of which 5.7% is attributed to the year-over-year change in the true-up.
 - The 2014 revenue requirement true-up, included in the 2016 revenue requirement, is a reduction of \$0.6M as compared to the 2013 true-up, included in the 2015 revenue requirement, which was a reduction of \$9.8M.

Future Operating Budgets, Initiatives, and Risks

- In developing the 2016 budgets, management contained costs and kept the budget increase to a minimum and in line with the preliminary budget presented in June. This was accomplished through:
 - a level funding approach to the Defined Benefit Pension Plan (see slides 57 & 58).
 - A reduction in our reliance on contractors and consultants; absorbing more of the work previously performed by vendors.
 - Reallocating resources to new initiatives in the Energy Management System, System Operations, and Market Operations areas.

Future Operating Budgets, Initiatives, and Risks *(cont.)*

- Looking to 2017 and beyond the potential for material risks and increased resource requirements is driven by continued Cyber Security threats, FERC Order 1000, and wholesale electric market enhancements.
- Management realizes the need to balance regulatory requirements, stakeholder needs, and being pro-active in addressing cyber security threats while limiting budget increases to what is necessary.

Accordingly, management has:

- Focused on how best to reallocate resources to emerging priorities and to drive additional efficiency in the organization.
- Prioritized competing proposals for market enhancements and the on-going resource commitment these often require once in place.

Next Steps

- The ISO will review the 2016 proposed Operating and Capital Budgets:
 - With the State Agencies on August 27th.
 - State Agencies may submit questions on ISO-NE's proposed budget by September 10th.
 - ISO-NE responses to State Agencies' questions are due within one week of receipt.
 - State Agencies' may submit comments regarding any proposed adjustments to the proposed budget by September 25th.
 - ISO-NE responses to State Agencies' comments and proposed adjustments are due on or about October 8th.
 - At the NEPOOL Participants' Committee (NPC) September 11th meeting
 - At additional meetings as requested.
- NPC will vote on the ISO-NE 2016 Budgets on October 2nd.
- ISO New England Board of Directors will vote on the Budgets subsequent to the PC meeting.
- ISO New England will file 2016 Budgets with FERC on or about October 16th.

Contents of Presentation

- Following this introduction, the presentation reviews:
 - Summary Budget Information (slides 13-16).
 - 2016 Budget Components (slides 17-23).
 - 2016 Budget Components by Functional Area (slides 24-45).
 - Compensation (slides 46-61).
 - Other Operating Budget Details (slides 62-77).
 - Risks and Opportunities (slides 78-81).
 - Depreciation (slides 82-85).
 - Capital Budget (slides 86-107).
 - Capital Structure (slides 108-109).
 - Cash Flow (slides 110-111).
 - Pro-forma Statements (slides 112-113).

Contents of Presentation *(cont.)*

- Three appendices are also included for reference:
 - Appendix 1: 2013 and 2014 Actual to Budget Variance Analysis.
 - Appendix 2: ISO/RTO Comparison.
 - Appendix 3: ISO New England 2016 – 2020 Business Plan.

SUMMARY BUDGET INFORMATION

Summary Budget Information

(Budget Amounts are in Millions)	<u>2016</u>	<u>% Change</u>	<u>2015</u>	<u>% Change</u>	<u>2014</u>	<u>% Change</u>	<u>2013</u>	<u>% Change</u>	<u>2012</u>	<u>% Change</u>	<u>2011</u>
Operating Budget Before Depreciation	\$152.3	3.9%	\$146.6	4.0%	\$140.9	4.0%	\$135.5	9.4%	\$123.9	5.4%	\$117.5
Capital Budget (1)	27.0	(3.6%)	28.0	0.0%	28.0	(4.4%)	29.3	4.6%	28.0	5.7%	26.5
Total Cash Budget	\$179.3	2.7%	\$174.6	3.4%	\$168.9	2.5%	\$164.8	8.5%	\$151.9	5.5%	\$144.0
Operating Budget Before Depreciation	\$152.3	3.9%	\$146.6	4.0%	\$140.9	4.0%	\$135.5	9.4%	\$123.9	5.4%	\$117.5
Depreciation	33.0	3.9%	31.7	11.6%	28.4	(0.4%)	28.5	5.2%	27.1	4.6%	25.9
Revenue Requirement Before True-up	185.3	3.9%	178.3	5.3%	169.3	3.2%	164.0	8.6%	151.0	5.3%	143.4
True up	(0.6)		(9.8)		1.9		0.9		(7.4)		(9.7)
Revenue Requirement	\$184.7	9.6%	\$168.5	(1.6%)	\$171.2	3.8%	\$164.9	14.8%	\$143.6	7.4%	\$133.7
Forecast – GWs (2)	139.6	(0.6%)	140.4	1.1%	138.9	0.0%	138.9	0.7%	138.0	4.2%	132.4
\$/KWh Rate	\$0.00132	10.3%	\$0.00120	(2.5%)	\$0.00123	3.6%	\$0.00119	14.4%	\$0.00104	3.0%	\$0.00101
Average Monthly Consumer Cost (3)	\$0.99		\$0.90		\$0.92		\$0.89		\$0.78		\$0.76

(1) 2014 Capital Budget includes the Backup Control Center (BCC) Data Center Transition Project; however, it excludes the BCC Project, which is funded by tax-exempt bonds

(2) 2016 Forecast based on May 2015 CELT Report. All other years based on CELT Report for the applicable year, which can be found on www.iso-ne.com.

(3) Based on average consumption of 750 kWh per month.

Note: Throughout the presentation some schedules may be inconsistent due to rounding.

New England Wholesale Electricity Costs^(a)

	2008		2009		2010		2011		2012		2013		2014	
	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh
Wholesale market costs														
Energy (LMPs)^(b)	\$12,085	9.1	\$5,884	4.6	\$7,284	5.6	\$6,695	4.9	\$5,193	3.9	\$8,009	6.0	\$9,079	6.9
Ancillaries^(c)	\$366	0.3	\$190	0.1	\$164	0.1	\$39	0.0	\$56	0.0	\$155	0.1	\$330	0.3
Capacity^(d)	\$1,505	1.1	\$1,768	1.4	\$1,647	1.3	\$1,345	1.0	\$1,195	0.9	\$1,057	0.8	\$1,063	0.8
Subtotal	\$13,956	10.5	\$7,842	6.1	\$9,095	7.0	\$8,079	5.9	\$6,444	4.8	\$9,220	6.9	\$10,472	8.0
Transmission charges^(e)	\$869	0.7	\$1,155	0.9	\$1,417	1.1	\$1,378	1.0	\$1,532	1.1	\$1,806	1.3	\$1,815	1.4
RTO costs^(f)	\$124	0.1	\$116	0.1	\$145	0.1	\$130	0.1	\$139	0.1	\$167	0.1	\$165	0.1
Total	\$14,949	11.3	\$9,113	7.1	\$10,657	8.2	\$9,588	7.0	\$8,115	6.0	\$11,193	8.3	\$12,452	9.5

(a) Average annual costs are based on the 12 months beginning January 1 and ending December 31. Costs in millions = the dollar value of the costs to New England wholesale market load servers for ISO-administered services. Cents/kWh = the value derived by dividing the dollar value (indicated above) by the real-time load obligation. These values are presented for illustrative purposes only.

(b) Energy values are derived from wholesale market pricing.

(c) Ancillaries include first- and second-contingency Net Commitment-Period Compensation (NCPC), forward reserves, real-time reserves, regulation service, and a reduction for the Marginal Loss Revenue Fund.

(d) Capacity charges are those associated with the Forward Capacity Market.

(e) Transmission charges reflect the collection for transmission owners' revenue requirements and tariff-based reliability services, including black-start capability and voltage support. In 2014, the cost of payments made to these generators for reliability services under the ISO's tariff was \$41.8 million.

(f) RTO costs are the costs to run and operate ISO New England Inc. and are based on actual collections as determined under Section IV of the ISO New England Inc. Transmission, Markets, and Services Tariff.

Snapshot of New England Retail Electricity Rates

Average retail price of electricity to residential customers January 2013, January 2014 and January 2015

State	January 2013 (cents/kWh)	January 2014 (cents/kWh)	January 2015 (cents/kWh)
Connecticut	17.05	18.29	21.00
Maine	14.49	14.45	15.62
Massachusetts	14.28	16.83	20.80
New Hampshire	16.01	16.54	19.15
Rhode Island	14.80	17.56*	17.72
Vermont	16.50	16.94	16.48

Source: U.S. Energy Information Administration (EIA) *Electric Power Monthly*

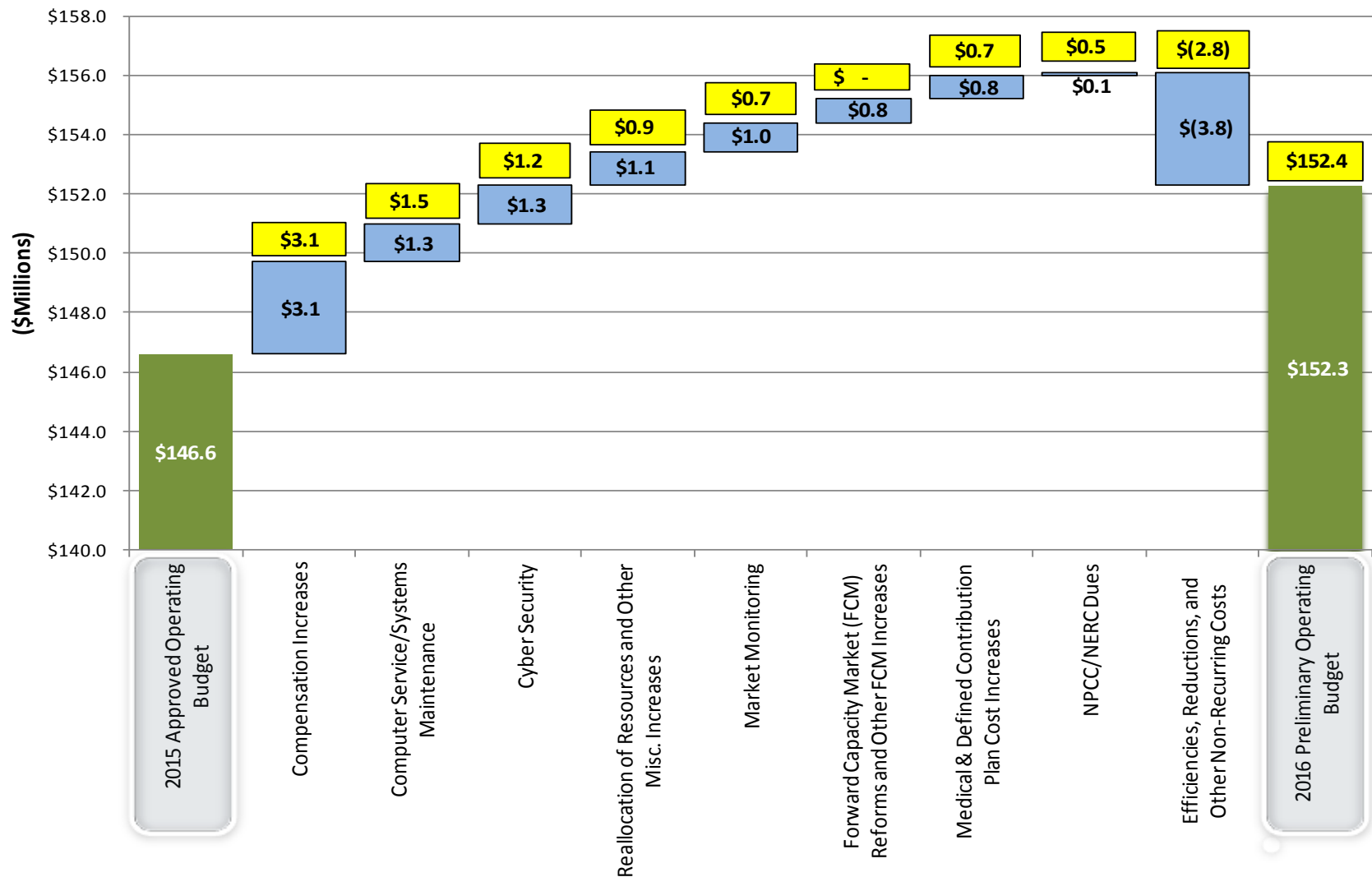
* The January 2014 monthly average retail price of electricity for Rhode Island was replaced with the 2014 annual average due to a discrepancy in the January 2014 monthly average reported by EIA.

2016 BUDGET COMPONENTS

2016 Budget Components

- The proposed 2016 budget was determined by combining the following:
 - Budget increases for:
 - Compensation – current estimate. Final budget proposal will be based on survey data.
 - Computer Services/Systems Maintenance.
 - Additional FTEs to support Cyber Security and Market Monitoring driven workload.
 - Reallocations of resources to new priorities and other miscellaneous increases.
 - Market Monitoring increased workload and monitoring enhancements.
 - Forward Capacity Market reforms and other increases.
 - Medical, Defined Contribution, and Postretirement Benefit Plan cost increases.
 - NPCC and NERC Dues.
 - Budget decreases for:
 - Non-recurring professional fees and internal staff work, absorption of certain work by internal staff that was previously performed by vendors, including an increase by internal staff for capital labor and a reallocation of staff to emerging priorities and work.

2016 Budget Components *(cont.)*



 Note: Items in yellow above represent the estimate that was included in the 2016 Preliminary budget presented in June 2015.

2016 Budget Components

Proposed Operating Budget

The following amounts are changes and assumptions from the 2015 budget:

Item	Description	Amount (\$ in millions)
Compensation Increases	Annual merit increase of 3.0% and promotional increases of 0.5% (see slides 46 through 61 for further information). As additional survey data is received, amounts will be revisited. Board Compensation Committee will approve final amounts.	\$ 3.1
Computer Service/Systems Maintenance	Computer Service licenses and maintenance increases for on-going support, additional fees for Microsoft product costs due to no longer receiving charity pricing, increased costs for systems backup software, funding for maintenance on new hardware/software for Business Continuity Upgrades, Web Enhancements, and the Open Access Same-Time Information Transmission System (OASIS).	\$ 1.3
Cyber Security	Funding for the addition of six Cyber Security positions to provide around the clock surveillance of systems and network (\$0.7), for new or enhanced monitoring software (\$0.4), and for Cyber Security Insurance (\$0.2).	\$ 1.3
Reallocation of Resources and Other Miscellaneous Increases	Maintenance on new control room communication systems (at both MCC and BCC), increased leasing of computer equipment, consulting including Model-On-Demand Support in Information Technology (IT), IT Energy Management System Support for numerous enhancements being introduced, System Operations training support including ensuring compliance with NERC Standards, and Market Operations/Settlements integration of market enhancements including Sub-Hourly Settlements, Divisional Accounting, Oracle Business Intelligence tool enhancements, and Third Party Clearing of Financial Transmission Rights.	\$ 1.1

2016 Budget Components

Proposed Operating Budget *(cont.)*

Item	Description	Amount (\$ in millions)
Market Monitoring	Funding has been included for the enhancement of monitoring capabilities through improvements in processes, data gathering, and analysis for systems enhancements (\$0.5). Additional funding has been added for two additional FTEs and consulting support to address Forward Capacity Market (FCM) driven workload related to De-list reviews, non-price retirements, Pay for Performance, and an update to the Offer Review Trigger Price (\$0.3) as well as funding for on-going Information Technology support of Marketing Monitoring systems (\$0.2).	\$ 1.0
Forward Capacity Market (FCM) Reforms and Other FCM Increases	Includes consulting and internal staff time in Market Development for design of Sloped Demand Curves, Qualification Process Changes, Forward Capacity Auction Pricing Rules and associated Reconfiguration Auctions, and Demand-Side participation in FCM. Also included is consultant funding in System Planning for updated calculation of Cost of New Entry (CONE) and net CONE for the 12 th Forward Capacity Auction (FCA), and in Market Operations for annual FCA review related to FCM changes and impact to auctions including “what-if” scenarios.	\$ 0.8
Medical & Defined Contribution Plan Cost increases	Medical Plans increase of 6%, an increase in funding for the Defined Contribution Plan as new employees are hired and become eligible (employees hired on or after January 1, 2014), and a slight increase in funding of the Postretirement medical benefit plan due to a change in the discount rate used in calculating this expense.	\$ 0.8
NPCC/NERC Dues	Slight increases in NPCC and NERC Dues, and funding for Eastern Interconnect Data Sharing Network fees.	\$ 0.1

2016 Budget Components

Proposed Operating Budget *(cont.)*

Item	Description	Amount (\$ in millions)
Efficiencies, Reductions, and Other Non-Recurring Costs	Includes non-recurring 2015 budgeted work (Post Maine Power Reliability Program Project Study Work, Impact Analysis, FERC Order 1000, Information Governance Program Design, and Other Misc.), absorption of or reduction in certain work performed by vendors in various areas including Legal, Market Operations, and Transmission Planning, an increase in capitalized labor as a result of expected lower reliance on external vendors, efficiencies gained through automation in Market Operations/Settlements including improvements in data querying and validation, resettlement processing, and various other reporting tools, and a reduction in salaries for rate changes due to staff turnover and retirements.	\$ (3.8)
Total		\$ 5.7

2016 Budget Components

Staffing Additions

The following represents a breakdown of headcount additions for 2016:

Business Area	Positions	Number of Positions (FTEs)
IT – Cyber Security	The addition of six positions to create a <i>Security Operations Center</i> that will provide around the clock coverage for monitoring and surveillance of the ISO's systems to address the increase in worldwide cyber attacks.	6.0
Market Monitoring	Funding for two positions for Forward Capacity Auction mitigation with additional workload associated with a new process around assessment of non-priced retirements and permanent de-list bids.	2.0
Other	Two employees going from part-time (30 hours per week) to full-time to support Information Technology Power System Modeling improvements and Outage Coordination in System Operations, while a Business Analyst position is going from full-time to part-time. See Note (1) below.	0.5
Total Positions		8.5

Note (1): Each change between part-time and full-time is represented by a 0.5 FTE change. For 2016 the ISO has only one part-time position which is represented as 0.5 FTE.

2016 BUDGET COMPONENTS BY FUNCTIONAL AREA

2016 Budget Components By Functional Area

ISO-NE provides a vast array of services to market participants and the New England region. Slides 25 through 45 include a description of the most significant services by area and provide the costs for Salaries and Burden, Professional Fees, and Computer Services for each area. Below is a reconciliation of the costs for each area and other support costs that make up the 2016 Operating Budget.

<u>Area/Item</u>	<u>Amount</u> <u>in millions</u>	<u>Area/Item</u>	<u>Amount</u> <u>in millions</u>
System Operations	\$ 22.0	Rents & Leases	\$ 1.1
System Planning	12.5	Network Operations	2.2
Market Operations	13.1	Computer Services	11.5
Market Development	5.2	Data Services & Office Expenses (1)	1.4
Information Services	28.5	Insurance Expense	2.2
Program Management and Business Architecture	4.0	Board of Directors Expense	1.2
Market Monitoring & Mitigation	5.6	Meeting & Related Expense	1.5
Legal Services	5.6	Education & Training	1.2
External Affairs and Corporate Communications	3.8	Taxes, Permits, Licenses & Fees (1)	0.3
Compliance, Risk Management, Finance, and Internal Audit	9.1	NPCC Dues	5.9
Human Resources	4.8	Interest Expense	2.5
CEO and COO and Support Staff	2.3	CEO Emerging Work Allowance and Board Contingency	1.8
Building Services	3.4	Misc. Revenues, Interest Income, and Purchase Discounts	(0.4)
		Total Operating Budget	\$ 152.3

(1) Comprises the \$1.7 million total of *Other Expense* on Slide 64.

2016 Budget Components By Functional Area

System Operations – 108.0 FTEs

Salaries (fully burdened)	\$ 21.7M
Professional Fees	\$ 0.3M

System Operations is responsible for the day-to-day operation of New England's bulk power system. This includes overseeing transaction management, outage coordination, unit commitment, economic dispatch, system restoration, operator training, certain compliance functions and the development of operating procedures. A more detailed breakdown of services is provided below.

Description

- Control Room Operations – Around the clock operation of the bulk power system including load forecasting, generation scheduling & generation dispatch.
- Transmission & Generation Outage Coordination - Including both short-term and long-term outage scheduling and coordination.
- Gas-Electric Coordination - Coordination and Information Sharing with gas pipelines, running capacity analysis scenarios across different seasons based on information gathered from fuel surveys and pipelines, establishing operating plans to deal with different system conditions, and communicating with stakeholders and regulators on a regular basis.

2016 Budget Components By Functional Area

System Operations *(cont.)*

Description

- Operating Guides and Studies - Review and update guides due to system transmission and generation changes, review and update real-time voltage limits, develop temporary guides for system modification during construction, and integrate new wind dispatching process into review of system operating limits.
- NERC/NPCC/FERC Compliance - Ensure compliance with new and existing orders by conducting a compliance assessment, reviewing and updating procedures, and finalizing Transmission Planning manual Version 1.
- System Operator Training - Development and ongoing training of operators to ensure compliance with NERC requirements.
- Maintain and Update - Schedules, Operating Manuals, and the Open Access Same-Time Information System (OASIS).

2016 Budget Components By Functional Area

System Planning – 66.0 FTEs (4.5 FTE are allocated to reimbursable studies)

Salaries (fully burdened) \$ 11.4M

Professional Fees \$ 1.1M

System Planning is responsible for development of the Regional System Plan, implementing the regional transmission planning process, administration of the generator interconnection process, developing findings for allocating transmission costs, interregional planning with our neighbors, and supporting New England's capacity markets. A more detailed breakdown of services is provided below.

Description

- Transmission Planning Studies – Study and support for requests to add or change interconnection and transmission service and ensure compliance with federal and regional reliability criteria as it pertains to planning of the New England Power System. Support regional transmission owners in state siting proceedings for major transmission projects. Implement new requirements detailed in FERC Order 1000.
- Forward Capacity Market Administration – Includes establishing regional and zonal capacity requirements; reviewing show-of-interest applications; qualifying new resources (generation, demand resources and imports); supporting administration of the Forward Capacity Auctions and supporting related FERC filings; performing all reliability analysis in review of retirement requests, de-list bids, reconfiguration auctions and bilateral contracts.
- Eastern Interconnection Planning Collaborative (EIPC) – Model Roll-up and Evaluation (contingency analysis and/or transfer analysis); participation in all levels of the EIPC structure including Technical Team, Economic Analysis Working Group, Coordination Committee, and Executive Committee.
- Attachment K Economic Studies – Carry out the regional economic planning process as requested by stakeholders on an annual basis for up to three economic studies per year.

2016 Budget Components By Functional Area

System Planning *(cont.)*

Description

- Energy-Efficiency (EE) Programs - Develop annual EE forecasts across the ten-year planning horizon and work with the EE Forecast Working Group to review and refine the EE forecast process for development of future forecasts. A similar process for state investments in distributed generation is now in place, and an annual forecast of solar PV across the ten-year planning horizon will be developed.
- Installed Capacity and Local Sourcing Requirements - Develops the regional Installed Capacity Requirement, and Zonal Local Sourcing Requirement and Maximum Capacity Limit values that establish the requirements within the Forward Capacity Market. These values are reviewed within the NEPOOL committee structure, advisory input is provided by the Reliability Committee and Participants Committee, and the values are subsequently filed with the FERC.
- Regional System Plan - Produce annual planning report that documents - all regional and interregional planning activities, and identifies resources and transmission facilities needed to maintain the reliable operation of New England's bulk electric power system over a ten-year horizon. ISO administers much of the regional planning process through interaction with the Planning Advisory Committee.
- Interregional Planning - Participate in joint planning activities with NYISO and PJM through the Inter-Area Planning Stakeholder Advisory Committee stakeholder process. This process results in development of a periodic report of activities in the Northeast Coordinated System Plan. Updates to this process are underway in compliance with FERC Order 1000.

2016 Budget Components By Functional Area

System Planning *(cont.)*

Description

- Compliance - Active involvement in NERC and NPCC Committees and related activities in support of compliance with established federal and regional reliability standards and interregional planning activities.
- Training - Support ISO-led training activities for the Forward Capacity Market, State Regulator and Market Participant training on the overall System Planning Process, and State Regulator Training on Transmission Planning criteria and analysis.
- Other - Conduct ten-year forecasting of seasonal peak demand and energy requirements and support operations daily forecast models; support regional dialogue on strategic planning issues through various types of system operations analysis; develop annual marginal emissions report; process and maintain Generating Availability Data System database; monitor and evaluate emerging state and federal environmental and renewable energy standards; support the North American Energy Standards Board standards development process; support individual state planning activities such as the Connecticut Energy Advisory Board, MA Energy Efficiency Advisory Council and the Vermont System Planning Committee.

2016 Budget Components By Functional Area

Market Operations – 81.0 FTEs (6.0 FTE are allocated to the capital budget)

Salaries (fully burdened) *	\$ 12.5M
Professional Fees	\$ 0.6M

Market Operations is responsible for the day-to-day operations of the wholesale electricity markets in New England. This includes administering and settling the markets, reporting market results, providing customer support and training, and developing market operating procedures to ensure compliance with FERC requirements.

Description

- Market Administration – Services to administer the Hourly and Monthly markets including Day Ahead, Financial Transmission Rights (FTR), Forward Reserve and Forward Capacity reconfiguration and monthly markets; administering the Forward Capacity Auctions and supporting related FERC filings; Real-Time price monitoring and finalization, resource registration, and Demand & Generation Resource auditing.
- Market Analysis and Settlements– Settlement and clearing of electricity market activity including Day-Ahead and Real-Time markets, Virtual and Bilateral transactions, FTR and Congestion Revenue accounting, Net Commitment Period Compensation Calculation and Payments, Ancillary Services, Forward Capacity Market, and charges and payments due under the Open Access Transmission Tariff.
- Market Reports – Weekly and monthly reports of market activities and results including load cost reports; providing support for ad hoc requests of market activity and data from market participants, FERC and other government officials.
- Market Service and Support – Encompasses various external service functions including the call center, resolution of market issues, membership processing, and training for market participants and government officials.
- Market Operations Support and Compliance – Corporate project support including the integration and testing of market design changes into wholesale electricity markets; development and maintenance of business procedures and operating manuals to ensure continuous compliance with the ISO New England Transmission, Markets, and Services Tariff.

*Note: Direct Market Operations costs for Internal Capital Development are included in the Capital Budget. The cost noted above only includes operating costs.

2016 Budget Components by Functional Area

Market Development - 22.0 FTEs

Salaries (fully burdened)	\$ 4.9M
Professional Fees	\$ 0.3M

Market Development is responsible for the design and development of Wholesale Electricity Markets and Wholesale Markets Strategy, Demand Resources Strategy, NEPOOL Markets Committee coordination, and Market Rules Integration.

Description

- Market Assessment – Development of enhancements to the current markets to address existing problems or emerging issues identified by ISO staff, the market monitors, stakeholders, and FERC. Working with impacted parties, both internal and external to the company, to shape appropriate solutions that will be filed with the FERC to implement approved design changes.
- Markets Committee – Chair the NEPOOL Markets Committee and actively work with NEPOOL and ISO-NE members and other stakeholders to review and collaborate on market rule changes that will be integrated into wholesale electricity markets.
- Tariff Updates and Compliance – Analysis of necessary updates to the ISO New England Transmission, Markets, and Services Tariff.
- Demand Response – Development and maintenance of Demand Resource programs that allow customers to respond to reliability or high price events when called upon.

2016 Budget Components By Functional Area

Information Services - 170.0 FTEs (32.0 FTE are allocated to the capital budget)

Salaries (fully burdened)*	\$ 25.7M
Professional Fees	\$ 2.8M

The ISO's Information Services group is responsible for the information and data integrity of the organization as well as all information systems functions, including data centers, technical service centers, cyber security, production scheduling, software development and systems operations. Total IT license and maintenance fees support 1,200 product versions, 1,200 servers, and 800 desktop systems.

Description	Amount (\$ in Millions)
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Information Technology (IT) Software Development and Power System Support (66.0 FTEs)

Staff perform the following functions:

- Application Architectural Design, Technology Evaluation and Selection.
- Corporate, Markets and Energy Management System Support including:
 - Power System Network Modeling and Maintenance.
 - Includes NX9 (Transmission) and NX12 (Generation) Systems.
 - Energy Management Systems Maintenance and Support.
 - Includes Inter-Control Center Communications Protocol (ICCP).

See
following
slide

*Note: Direct Information Services costs for Internal Capital Development are included in the Capital Budget. The Information Services costs noted on slides 33 through 36 only include operating costs.

2016 Budget Components By Functional Area

Information Services *(cont.)*

Description	Amount (\$ in Millions)
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Information Technology (IT) Software Development and Power System Support, cont.

Energy Market Applications Maintenance and Support.

- Includes Day-Ahead and Real-Time Energy Markets, Financial Transmission Rights (FTRs), the Testing and Training Simulator Environment (TTSE) and the Dispatcher Training Simulator (DTS), and ISO specific specialized systems (FCM Tracking System, Wind Integration, and Synchrophasor Monitoring).

Total IT Software Development and Power System Support:	\$ 9.2M
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2016 Budget Components By Functional Area

Information Services *(cont.)*

Description	Amount (\$ in Millions)
Information Technology (IT) Infrastructure and Enterprise Support Services (81.0 FTEs)	
Staff and Consultants perform the following functions:	
• Desktop, Host Computer hardware/software, and networking hardware support. • Data Communications including Main Control Center, Backup Control Center, and communications with Local Control Centers and other external touch points. • System Administration for Unix and Windows. • IT Asset and License Management. • Data Architecture, Database Administration, and Business Intelligence. • Web Application Support. • Software and Maintenance support for Market Administration, Market Monitoring, Settlements, Transmission Planning, Finance/Payroll, and Human Resources.	
Total IT Infrastructure and Enterprise Support Services:	\$ 14.1M

2016 Budget Components By Functional Area

Information Services *(cont.)*

Description	Amount (\$ in Millions)
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Information Technology (IT) Management, Cyber Security, and Software Testing (23.0 FTEs)

Staffing and Consultants perform the following functions:

- Direct Management of Software Development & Power System Support, Infrastructure & Enterprise Support, Cyber Security, and Software Testing (including change management).
- Cyber Security, including:
 - Policy and Procedure Development.
 - Controls Assessment.
 - Security Compliance & Reporting.
 - Virus/Malware Response & Reporting.
 - Intrusion Monitoring & Response.
 - Security Software Tools Maintenance & Support.
 - Critical Infrastructure Protection Compliance & Monitoring.
 - Security Metrics Collection & Reporting.
 - Change Control Testing & Reporting.
 - Security Awareness & Training, Software Change Management, and Quality Assurance Control.
- Software Testing Control.

Total IT Management, Cyber Security, and Software Testing:	\$ 5.2M
Total Information Services Staffing, Consulting, and Computer Services:	\$28.5M

2016 Budget Components By Functional Area

Program Management and Business Architecture - 33.5 FTEs (16.0 FTE are allocated to the capital budget)

Salaries (fully burdened)* \$ 3.8M

Professional Fees \$ 0.2M

The Program Management Office (PMO) is responsible for oversight and management of the Capital Budget. PMO and Business Architecture and Technology are responsible for implementing program and system changes for the broad range of services and related applications that run the New England bulk electric power system, the wholesale electricity markets, and other supporting ISO New England Systems.

Description

- Evaluation of New Projects – Review and determine need and possible solutions for proposed emerging work requirements to be presented to senior management for approval.
- Business Architecture – Develop both short-term and long-term solutions for systems architecture technology improvements, mathematical models to implement various market designs and improve market efficiency, algorithms and tools to improve system reliability, models to improve unit commitment.
- Project Management – Develop formal processes and procedures for the evaluation of capital project work including the value of proposed projects and determination of impacted business users; develop project scope and necessary resources; development & ongoing analysis of project budget, timeline, progression, risks and opportunities; ensure proper project testing and business user acceptance.
- Business Analysis and Product Management – Work with all business units to assess and review issues and opportunities for improvement, and manage implementation issues identified under the Corrective Action Preventative Action program to minimize disruption to business and system process.

*Note: Direct Project Management costs for Internal Capital Development are included in the Capital Budget. The cost noted above only include operating costs.

2016 Budget Components By Functional Area

Market Monitoring & Mitigation – 22.0 FTEs

Salaries (fully burdened)	\$ 4.0M
Professional Fees	\$ 1.6M

Market Monitoring is a FERC-mandated function of each Regional Transmission Organization (RTO). Per FERC, RTO Market Monitors must report directly to the Board of Directors to assure independence from management.

Description

The ISO's Internal Market Monitor is responsible for:

- Monitoring participant behavior and mitigating (reducing) participant bids if required.
- Analysis and reporting on market performance.
- Investigations and referrals to FERC of improper participant behavior.
- Identification of market design problems.
- Recommendations to improve market design.

Additionally, ISO-NE retains an External Market Monitor that reports to the Board of Directors on its review of market outcomes and market design changes. External Market Monitor funding is included in the Legal Professional Fees budget; however for purposes of Functional Area presentation it is included in the Market Monitoring & Mitigation amount above.

2016 Budget Components By Functional Area

Legal Services - 15.0 FTEs

Salaries (fully burdened) \$ 3.8M

Legal Fees \$ 1.8M

The ISO New England Legal Services budget includes funding for staff attorneys, a paralegal, support staff, and funding for external counsel to augment ISO Legal staff or for use where a particular expertise is needed.

Description

Both internal and external counsel cover work for:

- Capacity Market Development; Energy Market Complaints and Rule Changes; Administration of Open Access Transmission Tariff; Market Rule 1 Proceedings.
- FERC Proceedings; Federal & State Regulatory Matters; Market Monitoring Rules and Regulations.
- Interconnection Agreements and Transmission Upgrades.
- Financial Assurance Policy; Administrative Budget and Capital Funding Tariff; Corporate Tax and Contract Matters; Labor and ERISA Matters; Other Legal Matters.
- NERC and Other Compliance Support.
- Litigation and Protests to regulatory filings.

2016 Budget Components By Functional Area

External Affairs and Corporate Communications - 18.0 FTEs

Salaries (fully burdened) \$ 3.2M

Professional Fees \$ 0.6M

ISO New England's External Affairs and Corporate Communications are responsible for outreach to and communications with public officials, stakeholders, the media, ISO employees and the general public.

Description

- The Department:
 - Monitors energy-related media and communicates regional electric grid and wholesale markets data to media outlets.
 - Coordinates and develops ISO publications (i.e., Wholesale Markets Plan, Regional System Plan, Annual Reports, etc.).
 - Manages Web Design and Web Content.
 - Informs public officials on the performance and needs of the power system and wholesale markets.
 - Provides timely information to public officials, stakeholders and the media on the status of the power system, especially during abnormal and emergency situations.
 - Facilitates state input into the transmission system and market design processes.
 - Monitors state policy initiatives to inform the wholesale market development process and the regional system planning process.
 - Manages internal employee communications.

2016 Budget Components By Functional Area

Compliance, Risk Management, Finance, and Internal Audit - 44.0 FTEs

Salaries (fully burdened) \$ 8.2M

Professional Fees \$ 0.9M

Reliability & Operations Compliance, Enterprise Risk Management, Finance and Internal Audit provide services in support of the ISO's mission as described below.

Description

- Compliance – Works to ensure compliance with all FERC approved tariffs; regulatory and statutory compliance; NERC and NPCC compliance, certifications and audits; and coordination with and support of national and regional compliance reliability standard- setting authorities and related committees.
- Enterprise Risk Management – Programs and processes include corporate-level risk identification, assessment, monitoring and reporting; administration of Corrective Action/Preventive Action (“CAPA”) Program and Operation Excellence activities; Business Process Documentation Standards and Change Management; records management and retention policy; Business Continuity planning; corporate measures development; development and administration of the Financial Assurance Policy; and tariff change coordination.
- Finance – Responsible for payroll administration, procurement, accounts payable, budgeting and forecasting, accounting, financial statement and financial filings, corporate tax reporting, treasury, cash management, capital adequacy, settlement billing and cash clearing, government grant compliance, and financial reporting.
- Internal Audit - Conducts and coordinates audits across the organization and LCC's to ensure compliance with company policy, certification for system changes and to meet assurance requirements for external parties. Audits conducted by internal staff include operations performance audits, adherence to IT policies and procedures, and adherence to company administrative policies (i.e., employee expense reimbursement, purchasing policy). Coordination of external audits includes Statement on Standards for Attestation Engagements (SSAE) 16 audit, Financial Statement audit, Single Audit for Government grants, and market software certifications.

2016 Budget Components By Functional Area

Human Resources - 14.0 FTEs

Salaries (fully burdened) \$ 3.4M

Professional Fees \$ 1.4M

The ISO's Human Resource group is tasked with attracting, retaining and developing the company's uniquely qualified and highly skilled workforce,

Description

- Responsibilities include:
 - Recruiting candidates for full-time, part-time and temporary positions. The department recruits at all levels from summer interns to executives. Recruitment costs include expenses for the company's formal university relations, summer intern and co-op programs. They also include costs for external recruiter fees, background checks (initial and required updates), drug screening, visa processing, and testing of potential new hires (for certain positions).
 - Determining an appropriate compensation structure for the organization and appropriate compensation levels for all new and existing hires. HR participates in ongoing benchmarking surveys and works with external compensation consultants to benchmark remuneration for executives and the Board of Directors. HR annually benchmarks and administers pools for merit and promotional increases, as well as the company's incentive programs.
 - Establishing and administering competitive benefit programs. This includes the selection, design and administration of all health and welfare benefits (medical, life insurance, etc.) including work with providers and brokers, and the design and administration of the company's 401k and pension plan. The department benchmarks all benefits on an ongoing basis. Relocation benefits for new hires are administered from HR and associated costs are contained in the HR budget.

2016 Budget Components By Functional Area

Human Resources *(cont.)*

Description

- Designing, benchmarking and administering general Human Resource policies and programs including those for annual performance reviews and development plans, employee recognition, and employee issue resolution. The department supports the company's union employees and negotiates the union contract every three years. The HR department also manages all succession processes.
- Designing, developing and delivering both industry-specific and general training that is provided both "live" and via internally-developed classroom and web-based courses. The department manages the company's tuition reimbursement program, and reimbursement funds are housed in the HR budget. The HR department manages all employee development and organizational design efforts.
- Managing the ISO Reception function, including registration of numerous stakeholders and visitors to our secure facility.

Description

CEO, COO, and Support Staff – 5.0 FTE's

Salaries (Fully Burdened)	\$ 2.1M
Professional Fees	\$ 0.2M

2016 Budget Components By Functional Area

Building Services

\$3.4M

Building Services includes funding for physical and building security, utilities, maintenance, upkeep, cleaning, landscaping, snow and trash removal for both the Main Control Center and the Backup Control Center.

Description	Amount (\$ in Millions)
• Salary and benefits – 5.0 FTEs.	\$ 0.6
• Utilities.	1.4
• Repairs and Maintenance, Cleaning Services, Snow Removal, Landscaping, and Trash Removal.	0.8
• Security.	0.6
Total Building Services	\$ 3.4

2016 Budget Components By Functional Area

Meetings & Related Expenses and Education & Training \$2.7M

Includes travel, meals, lodging, incidentals, and course/seminar fees (where applicable) for stakeholder meeting costs, travel for regulatory meetings (FERC/NERC/NPCC), state agency meetings, technical and general training costs, attendance at industry and other conferences, education reimbursement, and offsite ISO-sponsored market training for participants.

Description	Amount (\$ in Millions)
• <u>Corporate Training</u> – Enterprise wide training programs including Leadership Development, Power System Management Degree Program and Cyber Security Degree Program. • <u>Regulatory</u> – Travel and related expense for regulatory meetings and support including FERC, NERC, NPCC and state agencies. • <u>Stakeholder Meetings</u> - Travel and related expense for ISO employees to attend stakeholder meetings throughout the region. • <u>Technical and NERC Certification Training</u> – NERC certification training and other job required training for the development, administration, or maintenance of IT Systems. • <u>Industry and Other Conference Attendance</u> – Attendance to speak, or provide industry expertise, attend joint ISO/RTO conferences, and attend other miscellaneous conferences. • <u>Training</u> - Management and General Training of ISO employees and related travel costs. • <u>Market Training</u> - Costs for offsite ISO sponsored market participant training classes. Includes facility and equipment rental and meals for participants. These costs are fully reimbursed by participant attendance fees (fees are included in Interest Income and Other Revenue line). • <u>Education Reimbursement</u> – Reimbursement for employment related degree programs approved by the Human Resources department and other job-related certification exams approved by the employees' manager. • <u>Other</u> – Includes miscellaneous travel reimbursement and employee service recognition.	\$ 0.5 0.4 0.4 0.4 0.4 0.2 0.1 0.1 0.2
Total Meetings & Related Expenses and Education & Training	\$2.7M

COMPENSATION

Process for Establishing Salary Budget Increases

- Each year, ISO-NE reviews comprehensive survey data that project what employers will budget for merit and promotional/equity increases for the coming year.
- The data is gathered from the surveys of six nationally-recognized compensation consulting firms, which provide general industry and utility industry data.
 - The firms are Buck, Mercer, WorldatWork, the Conference Board, TowersWatson and Aon Hewitt.
 - Survey data is presented by region, and by employee group – executive, management, exempt and non-exempt employees.
- The surveys are typically published later in the summer and are widely used by U.S.-based employers to understand competitive market shifts and develop salary budgets.
- The surveys report the planned budget increases of over 2,300 employers, including more than 100 utility companies.

Process for Establishing Salary Budget Increases *(cont.)*

- Data is classified into two categories – merit increases and promotional/equity increases.
 - Merit increase figures refer to the percentage of the total employee salary that companies intend to use for salary increases in the coming year.
 - At ISO-NE, this pool funds performance-based increases for eligible non-bargaining unit employees.
 - Individual percentage increases vary based on employees' performance, with some receiving less than and some receiving more than the budget percentage.

Process for Establishing Salary Budget Increases *(cont.)*

- Promotional/equity increase figures refer to the pool of money that employers set aside to cover promotions and equity adjustments.
 - This pool is much smaller than the merit increase pool and is not applicable to all employees.
 - Monies from this pool are used in select circumstances to fund promotions and, if necessary, market equity adjustments to keep compensation competitive for critical positions. For example:
 - In 2014 we made adjustments for 15 critical positions, following a compensation competitiveness benchmark study of our engineer, economist, IT and Program Management populations due to concerns with retaining current talent and filling vacancies (particularly transmission planning engineers).
 - In 2015, we provided the second set of compensation adjustments for nine of these individuals. While compensation for these professionals is now more appropriately aligned, we need to continue to monitor the benchmarks for these positions.
 - The economic recovery has increased opportunities for professionals with these highly specialized skills and we anticipate the need to provide additional targeted adjustments in 2016.

Process for Establishing Salary Budget Increases *(cont.)*

- In early September, when ISO-NE receives these compensation surveys, it prepares a summary for the Compensation and Human Resources Committee of the Board of Directors.
 - The Committee reviews the results at its September meeting and determines the next year's merit and promotional/equity adjustment increase percentages.
- In 2008 and 2009, in response to the economic downturn in the U.S., the compensation consulting firms published a second set of updated survey results in the fourth quarter of each year.
 - Since 2010 only one survey source has re-surveyed employers, as most employers indicated they would make no fourth quarter budget adjustments.
- ISO-NE reviews the survey data specific to its region and to industries from which it recruits.
 - The Company's goal is to set its salary increases at an appropriate amount within the ranges reported by the compensation consulting firms.
 - ISO-NE has utilized the process described in the previous slides since its inception in 1997.
- The table on the next slide compares annual survey data to ISO-NE's budgeted increases for the past ten years.

ISO New England Salary History

Comparison: Survey Data to ISO New England Salary Increase Budgets						
Year	Merit Increase Budgets			Promotion/Equity Increase Budgets		
	Survey Results		ISO-NE Budget	Survey Results		ISO-NE Budget
	Utility Industry	General Industry		Utility Industry	General Industry	
2016	Not yet available	Not yet available	3.0%	Not yet available	Not yet available	0.50%
2015	2.9% - 3.0%	2.9% - 3.1%	2.75%	0.5% - 1.0%	0.5% - 1.0%	0.75%
2014	3.0% - 3.0%	3.0% - 3.0%	3.0%	0.6% - 1.4%	0.5% - 1.0%	0.5%
2013	3.0% - 3.0%	2.8% - 3.0%	3.0%	0.25% - 1.0%	0.5% - 1.0%	0.9%
2012	3.0% - 3.0%	3.0% - 3.2%	3.0%	0.5% - 1.0%	0.5% - 1.0%	0.8%
2011	2.7% - 3.3%	2.7% - 3.3%	2.9%	0.6% - 1.8%	0.9% - 1.0%	0.9%
2010	2.5% - 3.1% Q4 data	2.5% - 2.8% Q4 data	2.5% final budget	Q4 data not reported	Q4 data not reported	0.5% final budget
	2.5% - 3.3% original data	2.6% - 3.1% original data	2.5% original budget	0.8% - 1.2%	1.0% - 1.2%	0.5% original budget
2009	3.2% - 3.5% Q4 data	2.9% - 3.6% Q4 data	3.0% adjusted in Feb. 2009	Q4 data not reported	Q4 data not reported	1.0% final budget
	3.5% - 4.5% original data	3.5% - 3.9% original data	3.5% original budget	0.9% - 1.9%	1.0% - 1.4%	1.0% original budget
2008	3.5% - 4.1%	3.5% - 3.9%	3.5%	1.0% - 2.2%	1.1% - 1.2%	1.0%
2007	3.4% - 3.8%	3.5% - 3.9%	3.5%	0.9% - 2.7%	1.2% - 2.2%	0.5%
2006	3.2% - 3.7%	3.4% - 4.1%	3.5%	0.9% - 1.6%	0.8% - 1.3%	0.5%

Note (*): The survey data for 2016 will be available in late summer.

Competitive Challenges

- If ISO-NE is to attract and retain the talent it needs to run its business, it must continue its practice of offering compensation that is competitive, as measured by the surveys described above.
 - Although our voluntary turnover rate has been relatively stable at approximately 4% for the past few years, the make-up of those departing is skewed towards younger, more mobile staff possessing high in-demand skills.
 - Most of the individuals who have departed over the past three years were in positions within System Operations, System Planning, IT, and Market Operations, all areas that are critical to operating the grid and running our markets.
 - It typically takes a minimum of six months to fill a transmission planning engineer vacancy, and can take as long as nine to twelve months.
 - The unemployment rate for these skills nationwide is under 2%. Our salaries in these areas tend to be equal or lower than the market rate and we often need to drop the level of the position in order to compete salary-wise.
 - The local market does not typically have the required experience and relocation is sometime challenging due to the company's location.
 - With improvement in the economy, we are seeing more competition for talent.

Competitive Challenges *(cont.)*

- As described in industry literature and shared with NEPOOL in the past, ISO-NE and utility employers face significant challenges associated with the retirement of a seasoned, technical workforce.
 - Numerous industry reports cite the average age of the utility workforce as 51- which is older than any other industry in the United States.
 - Approximately 25% of the ISO New England workforce will be retirement-eligible in 2016, that number increases to 29% in 2017.
- Jobs in the energy sector are expected to double by 2020, yet the pool of available talent continues to shrink.
 - There are a limited number of power engineering programs, and in some cases, retiring faculty are not being replaced putting the quality of some programs at risk.
 - In the last 15 years, there has been a 50% decline in the number of graduating engineers, followed by a steady decline in enrollments for master and doctoral studies.

Competitive Challenges *(cont.)*

- Competition for power system engineers, IT professionals with power expertise, and power system executives is particularly strong.
 - ISO-NE continues to experience increased competition for transmission planning engineers, IT professionals with power system experience, and power system management.
 - Skills in energy efficiency, renewable energy, and smart grid design and implementation are increasingly important, but hard to come by.
 - This competition will only intensify as the region becomes increasingly involved with new and emerging technologies.
- ISO-NE cannot offer equity compensation, as public for-profit companies do.
 - As the economy continues to improve and employees are faced with more career choices, this will put ISO-NE at a competitive disadvantage.
- Maintaining competitive compensation is a cost-effective measure that will help prevent turnover and ensure the Company does not experience vacancies that will hinder implementation of major initiatives or impact the efficient operation of its system and markets.

Executive Compensation

- As a tax-exempt organization, ISO-NE's Board of Directors is required by the Internal Revenue Code to determine that executive compensation is reasonable, as compared to similarly-situated taxable and tax-exempt organizations.
- After following its process for establishing increases described in previous slides, including reviewing survey data, ISO-NE's Board of Directors contracts with an independent consultant to study each executive position to ensure that the compensation proposed to be paid is "reasonable".
- Mercer is the independent firm used by ISO-NE's Board of Directors.
 - Mercer conducts its analysis by examining data from other ISOs, utilities, and as appropriate, the general industry.
 - Mercer considers the complexities of the markets, the significance of maintaining the grid, and the multi-billion dollars in settlements handled by ISO-NE, as it considers appropriate comparators.
 - Following its analysis, Mercer issues a Reasonableness Opinion.
- The Mercer Reasonableness Opinion has consistently concluded that ISO-NE's executive compensation is within the appropriate competitive range.

Executive Compensation *(cont.)*

- The Board Compensation and Human Resources Committee and the Board of Directors review the Mercer Reasonableness Opinion and use it to finalize their decisions regarding each executive's compensation.
- Executive compensation is reported in ISO-NE's annually filed IRS Form 990.
 - This public filing is required for all tax-exempt companies and depicts the officer compensation in detail.
 - In addition to annual compensation, the data includes incremental increases in accrued pension benefits and other potential future compensation not yet received by the executive.
 - As a not-for-profit, ISO-NE is required to meet standards of “reasonableness” for officer total compensation by IRC section 4958.
 - The IRC requires the ISO Board to evaluate if ISO New England compensation falls within a reasonable range of competitive practices, for total compensation paid by similarly-situated organizations, both taxable and tax-exempt, for functionally comparable positions.
- 2016 Budget for Executive Salaries \$4.4M
 - Executive Salaries comprise the base salaries of the 14 officers on the IRS Form 990.

Pension and Defined Contribution Benefit Plans in 2016

- In 2014, ISO-NE changed its retirement plan offering to a Defined Contribution Pension Plan (“DC” Plan) for employees hired after 12/31/13 and closed its Defined Pension Benefit Plan (Pension Plan) to new participants. The DC plans provide predictable cost and reduced balance sheet liability, with no investment risk and minimal cost volatility for the employer. The benefit levels it provides were also at or near market average, when compared to peers, as determined in a study performed by a consulting firm engaged by the Company in 2013.
- In 2016, for the Pension Plan, ISO-NE will modify the funding approach that it has consistently employed since 1997.
- ISO- NE previously calculated the budgeted Pension Plan expense amount in accordance with the Financial Accounting Standards (FAS).
- This amount was included in rates and contributed to the Pension Plan.
- The FAS expense calculation is subject to fluctuations in interest rates for the calculation of the liabilities and asset returns. These interest rate changes can and have created large volatility year over year in the calculated expense amounts and consequently cash contribution funding levels.

Pension and Defined Contribution Benefit Plans

in 2016 *(cont.)*

- In 2014 ISO-NE began looking into a level funding approach for the Pension plan. ISO-NE engaged its actuaries and its investment consulting firm to perform analyses on implementing a change to the current funding approach.
- The results of the analyses were that a Level Funding Approach was a viable option for the ISO's Plan to reduce the volatility of the expense, maintain a reasonable asset allocation to maximize returns and maintain reasonable funded levels.
- Management reviewed the analyses with the Audit & Finance committee of the Board, early in the second quarter of 2015. The Committee and management agreed to implement the level funding approach for inclusion in the 2016 filed rates.
- The Level Funding analysis showed that \$10,000,000 is expected to be a sufficient amount to contribute for the next ten years to the Pension Plan and based on the analyses will continue to allow for the Pension Plan to remain in good standing (i.e. 99% funded) and not place restrictions on the plan due to insufficient funding levels.
- The Pension Plan expense that is included in the 2016 budget is \$10,000,000 compared to the projected FAS expense of \$11,050,000.
- The ISO will request an update to the level funding approach if the underlying assumptions become materially different.

Postretirement Benefit Plan in 2016

- Consistent with previous years' budgets, the ISO's Actuaries prepared estimated 2016 Financial Accounting Standards (FAS) Expense for the Postretirement Benefit Plan.
- Actuaries utilized the May 2015 Citigroup yield curve to estimate the discount rate used in the calculation of the Postretirement Benefit Plan. Current rates approximate the forward curve rates.
 - Discount Rates Selected:
 - Postretirement Benefit Plan 3.70%
 - Salary Scale assumption 3.75%
 - Projected 2015 annual earnings rate 7.25% (approximately)
- The calculated FAS expense amount for the Postretirement Benefit Plan of \$1,072,000 is included in the 2016 budget.

Operating Budget Details

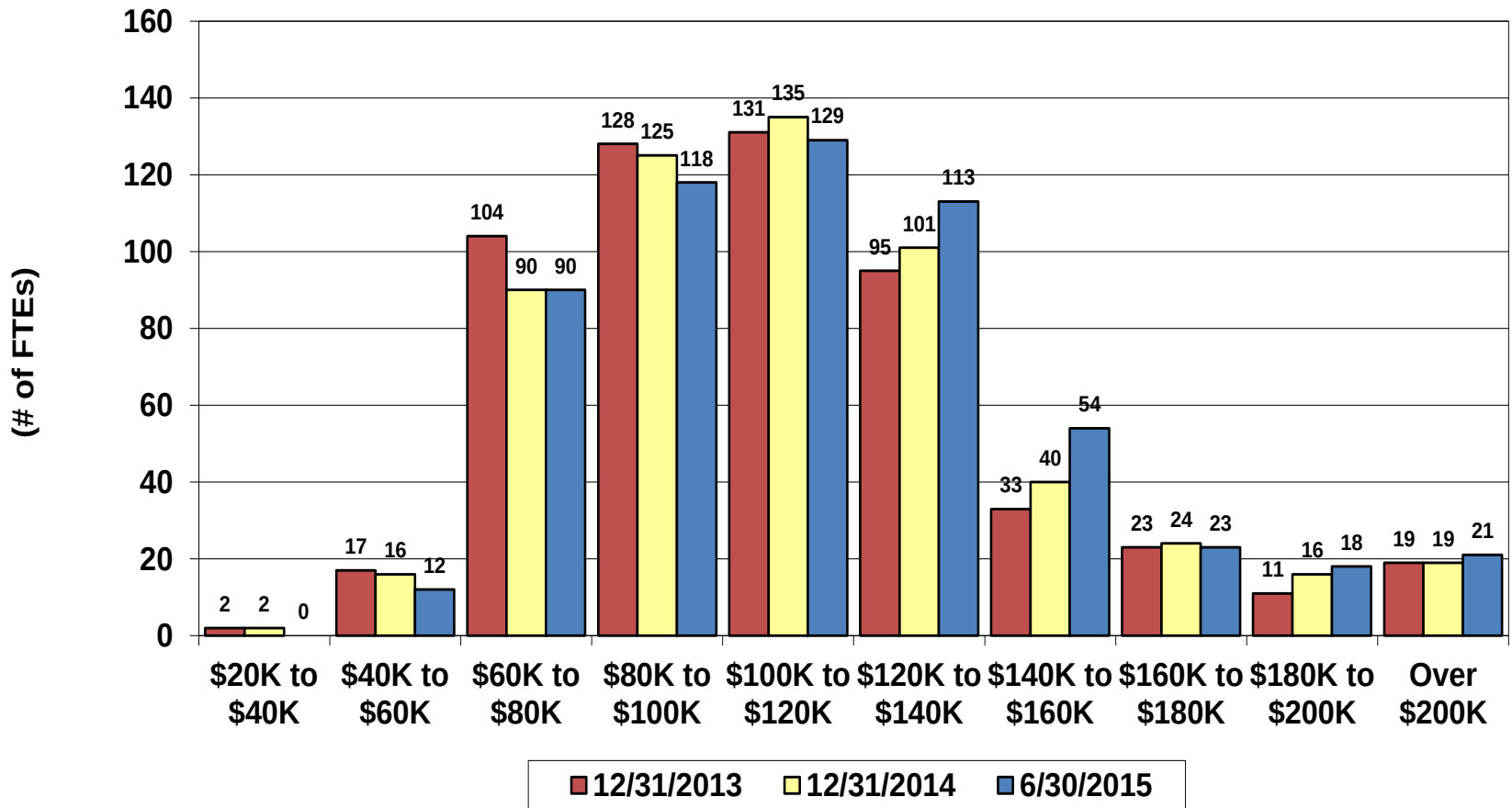
Staffing - Salary and Benefits Costs

The \$3.9M increase in salary and burden costs is driven by several factors:

2016 Merit & Promotion - (budgeted 3.5% increase, which will be finalized by the Comp Committee)	\$	3.1
Salary Impact of 8.5 Additional Staff	\$	1.1
Total Salary Impact	\$	4.2
Increase in Employee Benefit Costs	\$	0.8
Increase in Internal Capital Development Costs	\$	(0.9)
Salary Rate Changes	\$	(0.2)
Total Salary and Burden Increase	\$	3.9

Operating Budget Details

Staffing – Number of Employees by Salary Band



OTHER OPERATING BUDGET DETAILS

Operating Budget Details –

Reconciliation of the 2015 Operating Budget to 2016 Proposed Operating Budget

2015 Operating Expense Budget (\$ in Millions)	\$146.6
<u>Salary/Benefits Changes</u> (not related to new activities)	
2016 Compensation Changes (includes budgeted 3.5% merit and promotion increases to be updated and approved by Compensation Committee in September 2015)	\$3.1
An increase in Medical Plan cost trend (6% increase), an increase in funding for the Defined Contribution Plan as additional employees become eligible (employees hired on or after January 1, 2014), and a slight increase in funding of the Post-Retirement medical benefit plan due to a change in the discount rate used in calculating this expense	\$0.8
Total Salary/Benefit Increases	\$3.9
<u>Increases and New Activities</u>	
Computer Service increases including licenses and maintenance increases for on-going support, additional fees for Microsoft product costs due to no longer receiving charity pricing, increased costs for systems backup software, funding for maintenance on new hardware/software for Business Continuity Upgrades, Web Enhancements, and the Open Access Same-Time Information Transmission System (OASIS). Cyber Security funding including the addition of six Cyber Security positions to provide around the clock surveillance of systems and network, for new or enhanced monitoring software, and for Cyber Security Insurance.	\$2.6
Market Monitoring funding for two additional FTEs and consulting support to address Forward Capacity Market (FCM) driven workload and for the enhancement of monitoring capabilities, as well as additional funding for on-going Information Technology support of Marketing Monitoring systems. Forward Capacity funding for design of Sloped Demand Curves, Qualification Process Changes, Forward Capacity Auction Pricing Rules and associated Reconfiguration Auctions, Demand-Side participation in FCM, consultant funding for updated calculation of Cost of New Entry (CONE) and net CONE for the 12th Forward Capacity Auction (FCA), and in Market Operations for annual FCA review related to FCM changes and impact to auctions including “what-if” scenarios.	\$1.8
Maintenance on new control room communication systems (at both MCC and BCC), increased leasing of computer equipment, consulting including Model-On-Demand Support in Information Technology (IT), IT Energy Management System Support for numerous enhancements being introduced, System Operations training support including ensuring compliance with NERC Standards, and Market Operations/Settlements integration of market enhancements including Sub-Hourly Settlements, Divisional Accounting, Oracle Business Intelligence tool enhancements, and Third Party Clearing of Financial Transmission Rights. An increase also exists for NPCC/NERC Dues.	\$1.2
Total Increases and New Activities	\$5.6
Subtotal Increases	\$9.5
<u>Efficiencies & Reductions</u>	
Includes non-recurring 2015 budgeted work (Post Maine Power Reliability Program Project Study Work, Impact Analysis, FERC Order 1000, Information Governance Program Design, and Other Misc.), absorption of or reduction in certain work performed by vendors in various areas including Legal, Market Operations, and Transmission Planning, an increase in capitalized labor as a result of expected lower reliance on external vendors, efficiencies gained through automation in Market Operations/Settlements including improvements in data querying and validation, resettlement processing, and various other reporting tools, and a reduction in salaries for rate changes due to staff turnover and retirements.	(\$3.8)
Efficiencies & Reductions	(\$3.8)
2016 Proposed Operating Expense Budget	\$152.3

Operating Budget Details - Budget Categories

(see next slides for detail on certain categories)

(\$ in thousands)	2012 Actuals	2013 Actual	2014 Actual	2015 Budget	2016 Budget
Salaries	\$64,928	\$68,304	\$72,251	\$75,460	\$78,288
Burden	22,645	24,193	21,889	25,670	26,755
Professional fees and consultants	11,001	13,562	12,802	12,627	12,053
Building services	1,856	1,887	2,500	2,984	2,859
Rents/leases	353	498	848	1,032	1,142
Network Operations	2,019	1,807	1,979	2,038	2,190
Computer services	7,621	7,549	9,853	9,733	11,454
Insurance expense	1,713	1,796	1,880	2,008	2,201
Board of Directors Expense	1,078	1,112	1,172	1,170	1,170
Meetings & Related Expenses	1,277	1,242	1,343	1,541	1,487
Education & Training	1,005	1,110	1,120	1,207	1,223
NPCC Dues	4,949	5,056	5,388	5,776	5,893
Interest Expense	2,189	2,657	2,983	2,326	2,534
Contingency Funds	-	-	-	1,800	1,800
Other Expense	1,203	1,309	1,322	1,624	1,672
Interest Income & Other Revenue	(1,065)	(662)	(531)	(446)	(441)
Net Expense before Depreciation (1)	122,771	131,420	136,798	146,550	152,279
Depreciation	25,107	25,302	25,909	31,765	32,997
Total ISO Tariff Recovery	\$ 147,879	\$ 156,722	\$ 162,707	\$ 178,315	\$ 185,276
Revenue True-up	(7,365)	916	1,918	(9,778)	(622)
Revenue Requirement	140,514	157,638	164,625	168,537	184,654
Network Load (MWh)	128,047	138,875	127,137	140,430	139,583
Grid Market Charge \$/KWh	\$0.00110	\$0.00114	\$0.00129	\$0.00120	\$0.00132
Headcount (FTE's) (2) (3)	539.5	560.0	567.5	577.0	585.5

- (1) Net Expense Before Depreciation of \$152.3 million for 2016 agrees to slides 14, 19, and 63 of the presentation.
- (2) 2012, 2013 and 2014 reflect December 31 actual headcount for those years. 2015 reflects headcount of 595.0 less 3.0% vacancy which equates to 18.0 FTE's, and 2016 reflects headcount of 603.5 less 3.0% vacancy which equates to 18.0 FTE's.
- (3) Funding of \$7.6 million of Salaries and \$2.8 million of Burden exists for 2016 internal capital development and reimbursable study time of ISO-NE Employees. These costs are excluded from the Operating Budget.

Operating Budget Details - Budget Categories *(cont.)*

The following are explanations of budgeted items that are included in the *Other Expense* and *Interest Income & Other Revenue* lines of the budget details by category (as shown on the previous slide):

- *Other Expense* – this line includes Data Services & Office expenses which include subscriptions for industry and general information, professional dues, printing, office supplies and equipment, and postage and courier. This line also includes payment in lieu of taxes, bank fees, and business & license fees.
- *Interest Income & Other Revenue* – this line includes interest income on accounts, purchase discount (primarily from utility expense), and miscellaneous service revenue.

The following are line items that contain budget increases in 2016 which are greater than 5% or \$500,000 and a brief explanation of what is driving the increase:

- *Salaries (\$2.8M or 3.7%)* – this change includes funding for merit and promotional increases, and the addition of eight and a half positions. These increases were partially offset by a reduction due to an increase of internal capital development costs and reductions for salary rate changes for new positions hired due to employee retirements and staff turnover.
- *Burden (\$1.1M or 4.2%)* – Increases include employee benefit costs (primarily healthcare and dental rate increases), an increase in funding for the Defined Contribution Plan as additional employees become eligible, and a slight increase in funding of the Postretirement medical benefit plan due to a change in the discount rate used in calculating this expense. Also contributing to this line is burden associated with additional positions included in the budget.
- *Rents/leases (\$0.1M or 10.7%)* – increase for expansion of the leasing program to replace old laptops, desktops and monitors, which are generally on a three-year rotation.

Operating Budget Details - Budget Categories *(cont.)*

- Network Operations (\$0.2M or 7.5%) – increased costs include maintenance for a new phone system at both the Main Control Center and the Backup Control Center, and a full years cost on the Synchrophasor Infrastructure Data Utilization (SIDU) circuits, as these were previously covered 50% under the SIDU project, as well as inflationary costs on other communication lines.
- Computer Services (\$1.7M or 17.7%) – Increased costs for Computer Services include pricing change for Microsoft products due to the elimination of charity pricing formerly offered by Microsoft, system application backup storage improvements, support and ongoing fees for a new IT Asset Management System, new software to allow IT Cyber Security ability to audit third party organizations, new license costs related to the Open Access Same-Time Information Transmission System, Oracle, and Oracle Business Intelligence application increases, and various other increases including inflationary costs for maintenance contracts.
- Insurance Expense (\$0.2M or 9.6%) – increase for the addition of Cyber Security insurance.
- Interest Expenses (\$0.2M or 8.9%) – Increase for fees and interest expense for the Financial Transmission Rights Clearing line of credit; partially offset by a reduction in fees and expense due to a lower outstanding amount of tax-exempt debt as principal payments are made quarterly.
- Depreciation Expense (\$1.2M) or 3.9% – Depreciation expense increases include capital projects expected to be placed in service in the second half of 2015 or the first half of 2016, which will have a material impact on 2016 depreciation expense. These projects include: Generation Control Application Phase I and Coordinated Transaction Scheduling project expected to be completed in the fourth quarter of 2015, Wind Integration Phase II / Do Not Exceed (DNE) Dispatch project expected to go live in the first quarter of 2016, the Business Continuity Plan Infrastructure Enhancements Phase III – Markets Infrastructure and Remote Desktop projects (Q4 2015), Critical Infrastructure Protection (CIP) v5 project (Q4 2015), Forward Capacity Auction (FCA) 10 (Q1 2016), and other various projects. These increases were partially offset by assets becoming fully depreciated in 2015 or 2016, and include the Energy Management System 2.6 Upgrade, Synchrophasor Infrastructure and Data Utilization, Forward Capacity Market Reform, Balance of Planning Period – Financial Transmission Rights, and other various projects.

Operating Budget Details

Professional Fees

(See next slides for details)

	(\$ in Millions)			
		<u>2016</u>		<u>2015</u>
Corporate Center	\$	3.8	\$	3.4
Legal		2.7		3.2
Operations		5.6		6.0
Total Professional Fees	\$	12.1	\$	12.6

Operating Budget Details

Professional Fees – Corporate Center

	(\$ in Millions)	
	<u>2016</u>	<u>2015</u>
Corporate Center	\$ 3.8	\$ 3.4
Legal	2.7	3.2
Operations	5.6	6.0
Total Professional Fees	\$ 12.1	\$ 12.6

	(\$ in Millions)	
	<u>2016</u>	<u>2015</u>
Benefits and Hiring		
Relocation	\$ 0.3	\$ 0.3
Recruiter Fees and Background Checks	0.3	0.3
Temp Help	0.2	0.2
Compensation Surveys	0.2	0.1
Other Consulting for Pension & Benefits	0.5	0.6
Total Benefits and Hiring	1.5	1.5
Financial Support (Payroll processing, Temp Help, etc.)	0.2	0.2
Audits (i.e., SSAE 16, financial statement, benefit plans)	0.7	0.7
Corporate Communications (see following slide)	0.2	0.2
External Affairs (see following slide)	0.4	0.4
Enterprise Risk Management (QMS - Supporting other departments with CAPA, Casual Analysis Development and Professional Consulting Support)	0.1	0.1
Market Monitoring and Mitigation (FCM Related Reviews, Update of Offer Review Trigger Price, System Enhancement Support (i.e. Data Mart), and Professional Consultation)	0.7	0.3
Total Included in Budget	\$ 3.8	\$ 3.4

Operating Budget Details

Professional Fees –

External Affairs/Corporate Communications

	(\$ in Millions)	
	2016	2015
Corporate Center	\$ 3.8	\$ 3.4
Legal	2.7	3.2
Operations	5.6	6.0
Total Professional Fees	\$ 12.1	\$ 12.6

	(\$ in Millions)	
	<u>2016</u>	<u>2015</u>
State Educational Outreach / Legislative Monitoring	\$ 0.3	\$ 0.3
Media Relations / General Support	0.2	0.2
Federal Educational Outreach / Legislative Monitoring	0.1	0.1
Total Included in Budget	\$ 0.6	\$ 0.6

Operating Budget Details

Professional Fees –

External Affairs/Corporate Communications (*cont.*)

	(\$ in Millions)	
	2015	2014
Corporate Center	\$ 3.8	\$ 3.4
Legal	2.7	3.2
Operations	5.6	6.0
Total Professional Fees	\$ 12.1	\$ 12.6

- Purpose: To inform state and federal government stakeholders and policymakers on the performance and needs of the power system and wholesale markets.
- Activities:
 - Timely information on the status of the power system including:
 - Emergency communications during power supply deficiencies.
 - Continuous information on the current and future needs of the power system region-wide and on a state and sub-regional basis.
 - Facilitate state regulatory input into the transmission system and market design processes.
 - Monitor state initiatives related to power supply and retail rate design to inform the wholesale development process.

Operating Budget Details

Professional Fees –

	(\$ in Millions)	
	2015	2014
Corporate Center	\$ 3.8	\$ 3.4
Legal	2.7	3.2
Operations	5.6	6.0
Total Professional Fees	\$ 12.1	\$ 12.6

External Affairs/Corporate Communications *(cont.)*

- Resources

- Internal staff resources are focused on providing information to regulatory commissions, governors' offices, state legislatures, federal congressional offices, consumer advocates and business organizations.
 - Seven professional staff.
 - For the first seven months of 2015:
 - 64 utility commission / state agency meetings & briefings.
 - 35 state policymaker meetings & briefings.
 - 98 federal policymaker / regulator meetings & briefings.
 - 74 industry conferences & meetings participated in / attended by ISO-NE staff.
 - 4 legislative testimony.
 - 2 Consumer Liaison Group Meetings.
- External resources are focused on monitoring state and federal legislation initiatives, organizing educational opportunities and distributing timely information.
 - Contract consultants in each state, covering the New England Congressional Delegation, the Department of Energy, and congressional committees with jurisdiction for energy matters.

Operating Budget Details

Professional Fees – Legal

	(\$ in Millions)	
	<u>2016</u>	<u>2015</u>
Corporate Center	\$ 3.8	\$ 3.4
Legal	2.7	3.2
Operations	5.6	6.0
Total Professional Fees	\$ 12.1	\$ 12.6

	(\$ in Millions)	
	<u>2016</u>	<u>2015</u>
Independent Market Advisor	\$ 0.9	\$ 0.9
Market Rule Proceedings	0.5	0.2
New Initiative/Emerging Issues	0.4	0.7
General FERC Proceedings	0.2	0.4
Transmission Cost Allocation / Upgrades	0.2	0.4
ISO Tariff / OATT Proceedings	0.2	0.2
Labor Matters	0.1	0.2
Other	0.2	0.2
Total Included in Budget	\$ 2.7	\$ 3.2

Operating Budget Details

Professional Fees – Operations

	(\$ in Millions)	
	<u>2016</u>	<u>2015</u>
Corporate Center	\$ 3.8	\$ 3.4
Legal	2.7	3.2
Operations	5.6	6.0
Total Professional Fees	\$ 12.1	\$ 12.6

	(\$ in Millions)	
	<u>2016</u>	<u>2015</u>
Information Technology (SMS/SAS/EMS/CAMS Support, Model-On-Demand Short Circuit Model Building, Software License Management & Reporting Support, Website Support, Cyber Security and Vulnerability Testing, Desktop and Database Services Support, Improved Tools and Optimization, RTU and NX9/NX12 Network Model Support and other Temp Help)	\$ 2.8	\$ 2.6
System and Transmission Planning (Load Forecasting Support, PV/DG (solar photovoltaic) Forecast Improvement, Elective Transmission Upgrade, Bulk Power System Investigation, Transmission Planning / Non-Transmission Alternatives, Interconnection Studies, Short Circuit Analysis, and other various)	0.9	1.3
FCM (including Auctioneer Costs, auction software maintenance, Show of Interest Reviews, Qualification package review, Impact on FCM Qualification Process Changes, FCA Pricing Rules Analysis, FCM Analysis, Updated Calculation of Cost of New Entry (CONE) and net CONE for Forward Capacity Auction (FCA) 12, Initial Interconnection & De-List studies)	0.9	0.6
Project Management (Impact Analysis, R&D, Project Work and Initiatives)	0.4	0.6
System Operations Support (Operations Instructional Software Engineer and Training Designer, NERC Training Compliance, and other various)	0.3	0.4
Demand Resource Strategy and Market Development (Baselining - Demand Response as Reserves, and Market Development Consulting)	0.2	0.2
Market Operations (Business Analysis and Customer Service)	0.1	0.3
Total Included in Budget	\$ 5.6	\$ 6.0

Operating Budget Detail

2016 Budget for Board Compensation

2016 Budget (1)

• Annual retainer (\$50K/Board Member, plus \$15K Chairman, \$7.5K Vice Chair, \$7.5K Committee Chair)	\$0.5M
• Board Meetings (approximately 9 meetings at \$2,000/meeting/Board Member)	\$0.2M
• Committee Meetings (\$1,500/Board Member/Meeting) (2)	<u>\$0.3M</u>
Total Board Compensation (3)	\$1.0M
• Meetings and Travel Expenses	<u>\$0.2M</u>
Total Board Fees	<u><u>\$1.2M</u></u>

- (1) The budget contemplates 9 members for the entire year of 2016
- (2) There are on average about 60 Board and committee meetings per year
- (3) Board Fees are reviewed against independent surveys of Board compensation, similar to process used for determining executive compensation

Emerging Work Allowance

- ISO New England does not have “equity” or reserves to utilize but must fund unforeseen and newly defined work that arises after the budget is established.
- The CEO Emerging Work Allowance is used to fund requests for required activities that were not specifically funded in the original budget and changes to initial cost estimates.
- A risk is recorded on the Risks and Opportunities Report (R&O Report) when (i) unbudgeted new work is identified, or (ii) when staff becomes aware that budgeted work may exceed the original estimate. Likewise, when potential savings on a budgeted item are anticipated, an opportunity is identified.
- The R&O report contains information about the item and the probability of the occurrence of the item and is updated at least monthly.

Emerging Work Allowance – Process for Deposits and Withdrawals

- During the quarterly updates to the forecasts, cost center managers review the current amounts forecasted to determine the continued accuracy of their forecasts for the subsequent six months.
- They will integrate into their updated forecasts highly probable risks or savings that may have been previously identified on the R&O report or may be newly defined.
- An explanation is required to be provided by the cost center manager for why amounts are being deposited to the Fund (from savings identified) or why there is a need for a withdrawal from the Fund.
- All information pertaining to potential deposits to the Fund or withdrawals from the Fund, stemming from the updated quarterly forecast, is compiled and the detail is reviewed by the Supervisor of Budgeting and Financial Reporting and the Director, Finance & Accounting for reasonableness and/or the need for additional explanation.

Purchasing Policies and Controls

- The Company has established a Purchasing Policy with guidelines to follow when committing the funds of the ISO to any Vendor, including the placing and handling of Purchase Orders, Requests for Proposals and Quotes, Contracts and Approval Limits.
- The Purchasing Department is responsible for all purchasing decisions related to materials, equipment and services.
- The Purchasing Department will minimize costs of purchased goods and services where possible, while maximizing quality.
- All purchases require a purchase order unless a specific exception is noted in the Purchasing Policy – Exception examples- utility bills and telephone bills. It is important to note that regardless of these exceptions not requiring a Purchase Order to pay them, a rigorous review of the validity and accuracy of the charges is performed.
- The Purchasing Department is the only department with agency to purchase goods and/or services for the ISO and all contracts must be approved by the ISO legal department.
- The Purchasing Policy is available on the ISO's web site.

RISKS & OPPORTUNITIES

Risks & Opportunities

Risks include:

- Additional cyber security work – additional resources, professional fees and related funding may be required for the 2016 budget and beyond (2017 & 2018), as further risk assessments are continuing and new risks are identified. Risks may arise from the following:
 - Emerging Standards required by FERC or NERC.
 - Emerging Risks (i.e. new threats that we are currently unaware).
 - Costs of Vendor Compliance (costs for us or that vendor passes along to us for requiring compliance with our required standards).
- Additional funding for FERC Order 1000 related work.

Risks & Opportunities *(cont.)*

Legal/Litigation

- ISO-NE has an exposure to costs resulting from litigation.
- The Company does not budget for unanticipated litigation costs during the normal budgeting process.
- Therefore, any material litigation that arises during the course of the year would pose a risk to ISO-NE's ability to operate within the approved budget.

Federal and State Policy Directions

- The Company is continually subject to new and changing policies from FERC, NERC and state policymakers.
- If ISO-NE is not aware of the new requirement when the budget is prepared and submitted for approval to the FERC, the Company is at risk for any additional cost associated with the new requirement.

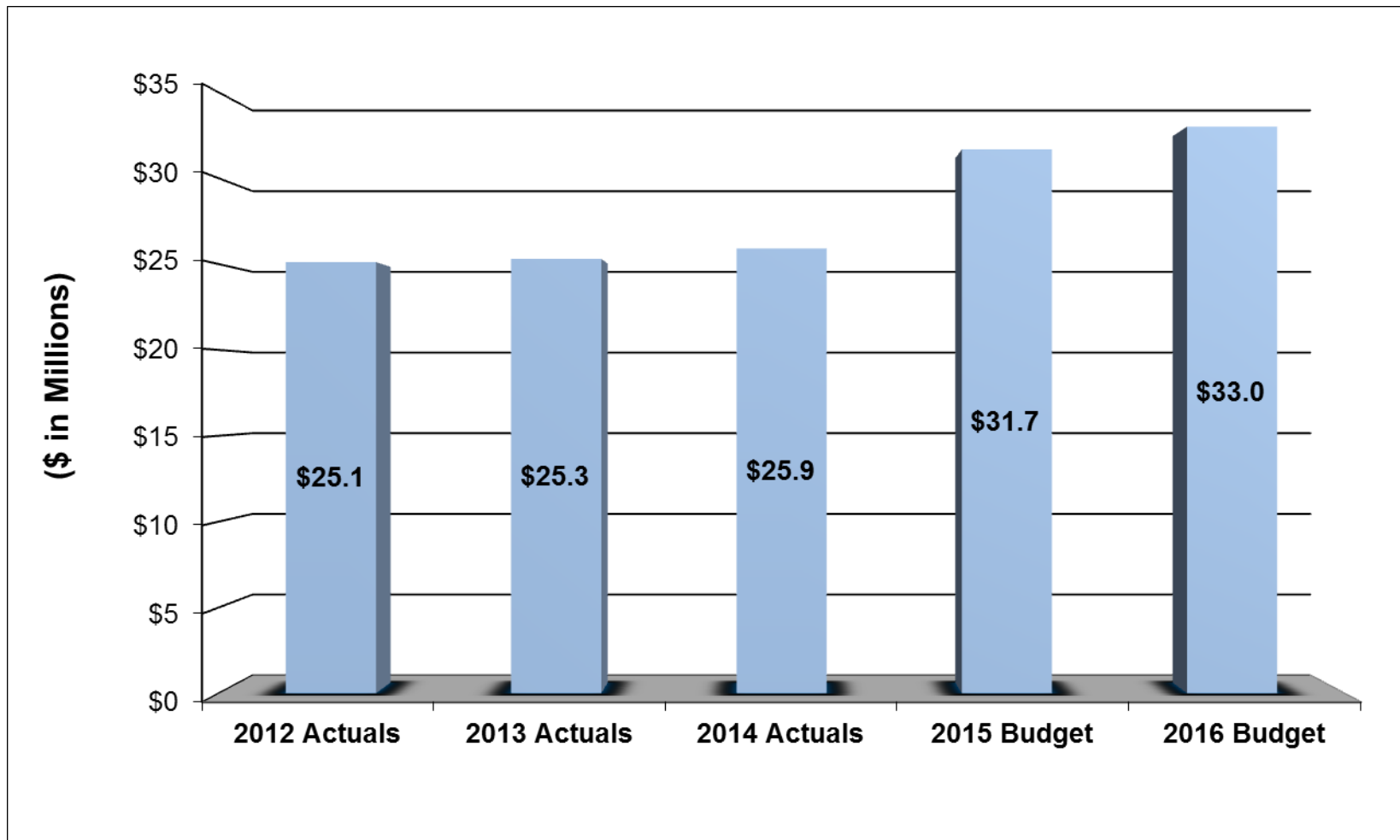
Risks & Opportunities *(cont.)*

Interest Rates

- A changing interest rate environment can have an impact on the costs of ISO-NE in several ways.
 - ISO-NE earns interest on the settlement float.
 - The average float in the settlement account prior to the end of 2008 had been consistently higher than the outstanding principal of the tax-exempt debt and therefore has been an effective hedge against increasing interest rates.
 - However, the market volatility in the latter part of 2008 and 2009 plus reduced energy clearing prices in 2010 through 2012 and in the majority of 2013 and 2014, created lower average float in the settlement account, which has negatively impacted this hedge mechanism.
 - In December 2012, ISO entered into additional tax-exempt debt which contributed to a much larger variable rate debt ratio to settlement float, increasing the historical natural hedge.
 - In November 2013, ISO entered into an interest rate cap to mitigate the risks associated with tax-exempt debt and specifically related to the expected “uncovered hedge” (due to reduced settlement float). The cap amortizes as the tax-exempt debt is repaid.
 - In addition, interest income rates have been dramatically reduced, producing much lower earnings, and the margin between our tax-exempt bond rates and the overnight taxable income rates has shrunk to almost zero difference.
 - These costs could exceed what’s predicted on slide 64.
 - ISO-NE pays a floating interest rate on its tax-exempt bonds.
 - ISO-NE utilizes interest rate assumptions in establishing liabilities and related costs for its pension and postretirement benefit plans. However, beginning in 2016 ISO will move to a level funding approach for the Pension plan, which will greatly mitigate this risk (see slides 57 & 58).

DEPRECIATION

ISO New England Depreciation



ISO New England Depreciation *(cont.)*

- The Capitalization Policy – Highlights.
 - Software development costs are also capitalized as required by the Cost of Computer Service Software Development Topic of the FASB Accounting Standards Codification.
 - The capitalized cost of new hardware or software includes the first year of maintenance for hardware and software.
 - The Main Control Center and the Backup Control Center building costs were capitalized using the component methodology at the various category levels, such as furniture and fixtures, air conditioning units, and the control room board.
 - In addition, the project management time spent managing capital projects, the test coordinators time and business analysts time in the Project Management department, is capitalized and is specifically noted in the Annual Administrative Costs Services and Capital Budget Filing.

ISO New England Depreciation *(cont.)*

Below is a table of the ISO's asset classes and depreciable lives

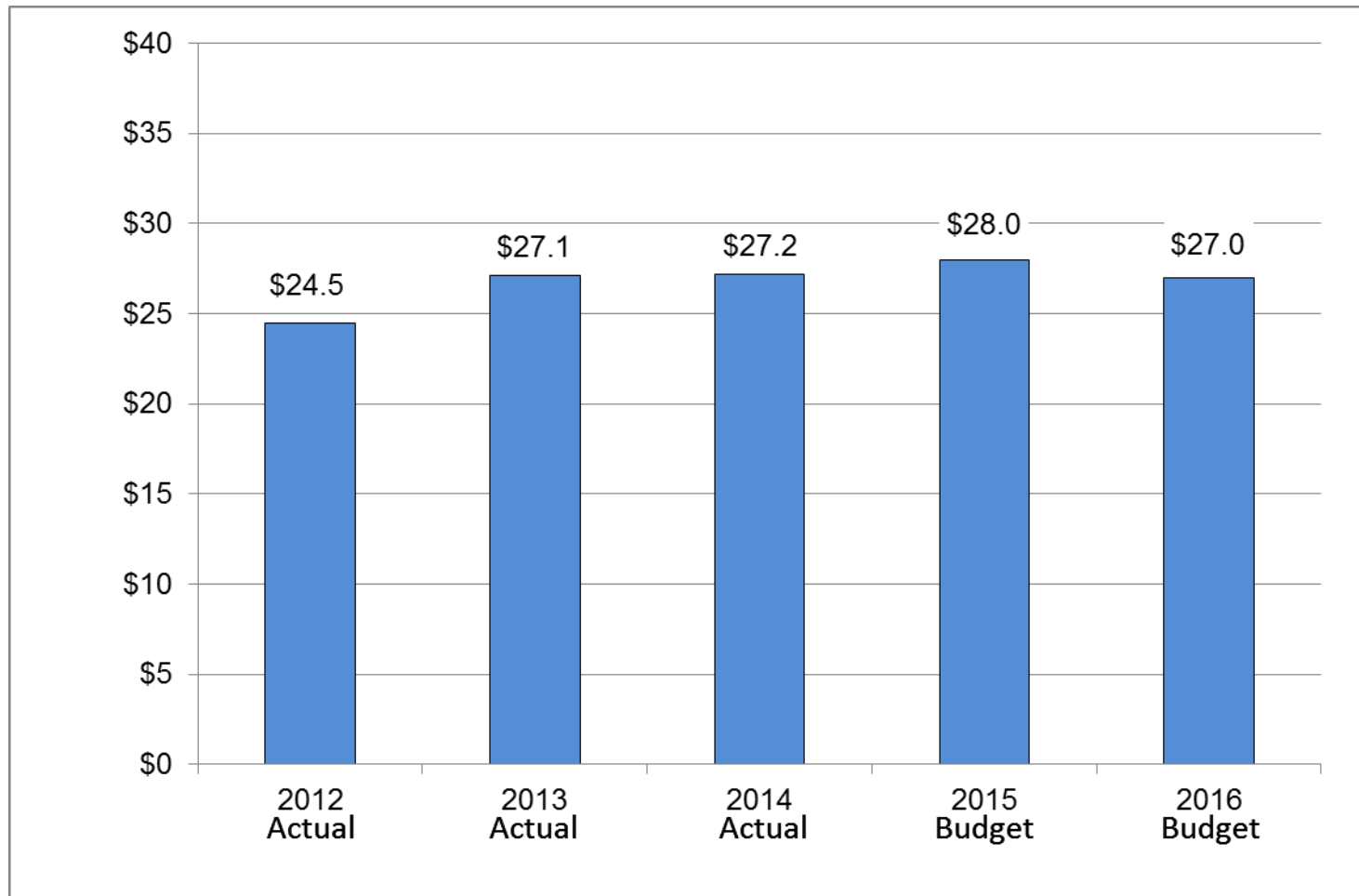
Asset Class	Depreciable Life
Computer Hardware, Software, and Accessories	3-5 Years
Software Development Costs	3-5 Years
Furniture and Fixtures	7 Years
Machinery & Equipment	7 Years
Building Improvements	Useful life of the improvement
Leasehold Improvements	Useful life of the improvement or remaining life of the lease
Building	25 Years (economic useful life determined during bond offering)
Vehicles	3-7 Years

CAPITAL BUDGET

Capital Budget

Historical Comparison Capital Expenditures

Average +/- \$27M



Capital Budget

2016 Expenditures

Major Projects In Development:		
	Wind Integration Phase II / Do Not Exceed (DNE) Dispatch	\$2.3M
	Forward Capacity Auction (FCA) 10	\$0.6M
	Divisional Accounting	\$0.5M
	Zonal Load Forecast	\$0.2M
In Planning/Conceptual Design		
	Forward Capacity Auction (FCA) 11	\$3.0M
	Sub-hourly Settlements	\$2.5M
	Fast Start Pricing	\$2.5M
	Submission of Financial Transmission Rights (FTR) for Clearing	\$1.8M
	2016 Issues Resolution Project	\$1.5M
	Expand Energy Offers for Pumps	\$0.9M
	Quarterly Release Projects 2016	\$0.8M
	Asset Characteristic Database & User Interface Re-Design	\$0.7M
	Energy Management Platform Customs Elimination	\$0.6M
Continued Next Page		

Capital Budget

2016 Expenditures *(cont.)*

In Planning/Conceptual Design (Continued):		
	Operations Document Management System	\$0.6M
	Transmart Rewrite	\$0.5M
	Web Enhancements 2016	\$0.5M
	Asset Registration Automation	\$0.5M
	Dynamic Interchange Adjustment Tool	\$0.3M
	Oracle 12c Upgrade	\$0.1M
	Case Snapshot Enhancements for Market Operator Interface	\$0.1M
	Price Responsive Demand	\$0.1M
	Non-Project Capital Expenditures	\$3.7M
	Other Emerging Work	\$2.2M
	Capital Interest	\$0.5M
Total 2016 Capital Budget		\$27.0M

Capital Budget

2016 Expenditures/Major Projects in Development

Wind Integration Phase II/Do Not Exceed (DNE) Dispatch

\$2.3M

The Wind Integration Phase II/Do Not Exceed (DNE) Dispatch project is the second phase in the project to fully integrate wind power into the ISO-NE system. Phase I of the Wind Integration project established a centralized wind power forecast system for ISO-NE, putting the forecast into use by wind plant operators and ISO-NE. The wind power forecast was a direct recommendation from the New England Wind Integration Study (NEWIS) and first step towards the full integration of wind into ISO-NE systems. The Phase I project implemented the infrastructure that can be used to extend the usage of the wind power forecasts into other ISO-NE processes.

The Wind Integration Phase II/ Do Not Exceed (DNE) Dispatch Project builds on Phase I by adding both improvements and new functionality. Phase II includes short-term wind power forecast improvements; publishing medium-term and long-term forecasts; adding a new wind power forecast analysis archive; improving real-time wind dashboard displays; and adding Do Not Exceed dispatch for intermittent resources.

Phase II will employ the wind power forecast to facilitate the inclusion of wind resources in the real-time dispatch. Allowing real-time dispatch will alleviate issues with curtailment priorities, allow wind resources to set price, and provide the proper market signals for new capacity.

The targeted completion date for this project is May 2016.

Capital Budget

2016 Expenditures/Major Projects in Development *(con't)*

Forward Capacity Auction (FCA) 10

\$0.6M

The FCA-10 project will address Tariff revisions that were filed with the Commission on May 1, 2015 to introduce qualification and Forward Capacity Auction related changes to address the potential exercise of market power. These changes include: increasing the Dynamic De-List Bid Threshold, supplier-side mitigation of New Import Resources that function more like existing resources than new resources, and establishing a single pivotal supplier test that applies both capacity imports and existing resources. Other market-related changes include the implementation of a system-wide demand curve in the Annual Reconfiguration Auctions and functionality to support Renewable Technology Resources.

In addition to the market changes discussed above, the FCA-10 project will include upgrades for the software used to support the Forward Capacity Market Qualifications. Oracle and Microsoft have announced that the current versions of Oracle (11g) and Internet Explorer (v.8) in use by ISO New England have reached their end of life and will no longer be supported effective January 2016. The existing software will be upgraded to Oracle version 12c and Internet Explorer to version 11.

The targeted completion date for this project is May 2016.

Capital Budget

2016 Expenditures/Major Projects in Development *(con't)*

Divisional Accounting

\$0.5M

The Divisional Accounting project is a multi-phased project, implemented at the request of Market Participants, to add software functionality to permit separation of settlement accounts by individual business unit. This will facilitate customers' divisional accounting, allowing customers to easily evaluate their positions by business unit, division or generating facility.

Due to the complexity of the implementation and the vast number of systems impacted, the project was designed with five phased releases originally scheduled to occur in 2014 and 2015. The first four phases of the project are complete. However, due to resource conflicts, specifically with the Coordinated Transaction Scheduling project, the fifth and final phase of the project, which focuses specifically on external transactions and their respective settlements, has been delayed.

Re-planning analysis is underway for the Phase 5 release and initial estimates indicate a completion during 2016.

Capital Budget

2016 Expenditures/Major Projects in Development (*con't*)

Zonal Load Forecast

\$0.2M

On May 29, 2012, temperatures in Connecticut were much higher than those in coastal Massachusetts. The load forecast at that time was based on a weighted average of the weather forecasts for various New England locations. This approach works well when weather follows normal seasonal patterns. However, when very hot and humid conditions occur inland and the coastal regions experience a cooling sea breeze as they did on May 29, 2012, the load forecast is no longer accurate. On that date, the result was unexpectedly high loads in Connecticut and very tight capacity conditions in the inland regions of Massachusetts.

In response to the above, ISO-NE developed a Zonal Load Forecast prototype which addresses the problem by creating a load forecast for each load zone. This project will build on the successful prototype by incorporating Zonal Load Forecast functionality for these regions into the existing Load Forecast application, and adjusting downstream systems using load forecast data accordingly. By resolving the issues with these two zones, the overall load forecast for the region will improve.

The targeted completion date for this project is March 2016.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design

Forward Capacity Auction (FCA) 11

\$3.0M

In its May 30, 2014 order, the Commission stated its expectation that Tariff changes in support of zonal sloped demand curves would be filed by January 2015 to be in place by the tenth Forward Capacity Auction. On May 18, 2015, the ISO filed a report with the Commission explaining that the ISO is not yet able to propose improvements to the current Forward Capacity Market demand curve structure that will be reasonably robust and satisfy both reliability and pricing objectives in time for FCA-10.

The design and implementation of zonal sloped demand curves is now scheduled to be completed with the eleventh Forward Capacity Auction, to be held in February 2017.

Sub-hourly Settlements

\$2.5M

The real-time markets (energy, reserve, and regulation) are settled hourly, even though the ISO calculates real-time locational marginal prices every five minutes. Existing settlement rules tend to undercompensate certain resources, particularly more flexible generation and storage assets that respond quickly when system events result in tight operating conditions and there are significant mid-hour price changes. Compensating resources at the more granular, five-minute price would help improve price formation by ensuring that the price suppliers are paid for real-time performance is a more accurate market signal of the power system's current operating conditions. In the future, this change may also provide an additional revenue source for wholesale electricity storage resources.

The targeted completion date for this project is the fourth quarter of 2016.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Fast Start Pricing

\$2.5M

ISO-NE's existing fast-start pricing logic was designed fifteen years ago to work within the software/hardware limitations that existed at the time. In practice, fast-start units, even when deployed in economic merit order, often do not set the real-time price given their operating characteristics.

The proposed changes will increase accuracy and efficiency to dispatch, pricing, and compensation when fast-start units are deployed. The real-time fast-start pricing changes will improve price formation by enabling fast-start resources to set price more frequently, and reflect the cost of fast-start deployments through transparent market price signals. This also can improve performance incentives for all resources during tight system conditions when reliability risk is heightened.

The targeted completion date for this project is the first quarter of 2017.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Submission of Financial Transmission Rights (FTR) for Clearing **\$1.8M**

The objective of the Submission of Financial Transmission Rights (FTR) for Clearing project, currently in planning, is to address the inability to properly collateralize against the risk of a participant default by instituting third-party clearing. Currently, ISO-NE holds Financial Assurance that may not be adequate to cover the potential losses of a Market Participant's default on its FTRs. Specifically, there is no way for ISO-NE to unwind a defaulted FTR position. If a participant acquires a large position in an annual FTR auction, and the amount of negative target allocations exceeds its Financial Assurance, the losses on this position, and the losses to all ISO-NE participants in the event of a default, can continue to accumulate.

Regulatory and jurisdictional questions surrounding the project have resulted in major delays. Minimal work on the project will continue in 2015 with the majority of development work anticipated to occur in 2016.

The targeted completion date for this project is the fourth quarter of 2016.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

2016 Issues Resolution Project

\$1.5M

The ISO uses a “Corrective Action/Preventative Action” approach to identify and track needed enhancements to existing systems and processes. This project is anticipated to occur in two phases and will continue efforts to resolve as many current outstanding issues that have a software impact as possible.

These issues include automation of manual functions, addition of functionality in support of market activities, miscellaneous application improvements, internal and external report updates, and technology improvements. The ISO Information Technology and Systems groups will review the list of issues related to the systems and applications for which they provide support and identify those that can be implemented during the year.

The targeted completion date for this project is the fourth quarter of 2016.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Expand Energy Offer for Pumps

\$0.9M

The ISO does not currently allow Dispatchable Asset Related Demands (DARDs) to have inter-temporal constraints (start-up, notification, minimum run and down times, and maximum number of starts per day). In response to the Commission's Order No. 719, ISO-NE agreed to modify this practice. Specifically, the ISO committed to enable DARDs to have maximum demand-dispatch duration, maximum dispatch frequency, and a minimum down-time. In addition, the ISO will expand the rules for Net Commitment Period Compensation and define cost allocation rules for DARDs.

The targeted completion date for this project is the fourth quarter of 2016.

Quarterly Release Projects 2016

\$0.8M

In addition to major projects under consideration for 2016, the ISO expects to address a number of minor enhancements requested by stakeholders. These minor enhancements are bundled into two quarterly releases.

The targeted completion date for the first release is the second quarter of 2016, and the second release is targeted for completion in the fourth quarter of 2016.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Asset Characteristics Database & User Interface Re-design **\$0.7M**

The Asset Characteristics Database User Interface Re-design project will provide participants and ISO-NE internal Market Monitoring staff enhanced functionality to track generator characteristics for reference level calculations. This project will build upon functionality delivered as part of the Energy Market Offer Flexibility (Hourly Markets) project.

The targeted completion date of this project is the third quarter of 2016.

Energy Management Platform Customs Elimination **\$0.6M**

ISO-NE's Energy Management System is based on Alstom Grid's suite of Energy Management Platform applications. When absolutely necessary, the Information Services department customizes Alstom's software to suit the business needs of ISO-NE. Accordingly, when Alstom upgrades its software, a significant effort is needed to port the customized ISO-NE software to the upgraded software.

This project involves work with Alstom Grid to eliminate some of the ISO-NE customs, with the goal of simplifying the next software upgrade.

The targeted completion date for this project is the fourth quarter of 2017.



Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Operations Document Management System

\$0.6M

The Operations Document Management System (ODMS) has proven to be a stable and effective tool for managing System Operations Documents. System Operations is currently using ODMS as the sole system for managing the edit, review and sign-off for all transmission operating guides, operating procedures, master local control center procedures, and system operating procedures. ODMS also provides operational functionality, including searching and decision making. Since ISO-NE is phasing out SharePoint based applications such as ODMS, the project will migrate ODMS to a new software platform.

The project is targeted completion is in the fourth quarter of 2016.

Transmart Rewrite

\$0.5M

Transmart is a software application that is used by the ISO-NE system operations staff to support external transactions. The Transmart application has been in existence prior to the implementation of Standard Market Design in 2003. The Transmart Rewrite project upgrades the remaining functionality that still exists in the original Transmart application.

The targeted completion date for this project is Q4 2016.



Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Web Enhancements 2016

\$0.5M

In an effort to continue to improve the ISO New England web presence, the Web Enhancements 2016 project will implement the most requested, highest priority requirements focused on improving the usability and technical support of the internal and external websites. The enhancements will provide significant benefits for both internal and external website users.

The project is targeted for completion in 2016.

Asset Registration Automation

\$0.5M

The current asset registration process relies on participant submittal of scanned, emailed, or faxed asset registration forms or spreadsheets. This project aims to improve the asset registration process by providing a digital format for submittal of asset registration forms.

The benefit will be a secure digital method for customer retrieval and submittal of asset data, in addition to requested asset data changes and transfers. The repository would allow for the required controls for this data and ensure that all customers and business users would have access to timely and accurate asset data without the need to maintain separate databases, spreadsheets, binders, or duplicate forms.

This project would also provide a workflow to manage the necessary participant and ISO approvals required for asset registration and changes to existing asset data.

The targeted completion date for this project is the third quarter of 2016.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Dynamic Interchange Adjustment Tool

\$0.3M

Currently, ISO-NE sets hourly interchange schedules with neighboring control areas in New York, Quebec and New Brunswick. The schedules all change concurrently once per hour and are primarily ramped over a ten-minute period beginning five minutes before the top of each hour. System Operating Procedures apply uniform ramp limits to all hours without regard to actual system conditions or system ramping capability. The use of a uniform ramp limit can result in unnecessary curtailment of transactions, or may occasionally fail to account for a shortage of ramping capability.

The purpose of the Dynamic Interchange Adjustment Tool project is to predict secure ranges of system ramping capabilities for intra-hour interchange adjustments, and to address the additional layer of complexity created by the advent of intra-hour scheduling with New York.

The project is targeted for completion in the fourth quarter of 2016.



Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Oracle 12c Upgrade

\$0.1M

Many ISO-NE business applications rely on an Oracle database. Obtaining the level of support needed from Oracle to meet our availability goals requires that we run on the current Oracle database version for each application.

This project will incorporate a phased approach to ensure all systems are upgraded from Oracle version 11g to Oracle version 12c by taking advantage of current and upcoming projects where feasible. Accordingly, this project's scope will then specifically address only database upgrades and performance testing for those systems not covered under a current or upcoming project.

The targeted completion date for this project is the second quarter of 2016.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Case Snapshot Enhancements for Market Operator Interface **\$0.1M**

On July 3, 2013, the Commission approved ISO-NE's proposal to use the \$1 million in funds provided to ISO-NE under the Stipulation and Consent Agreement between Constellation Energy Commodities Group and the Office of Enforcement. That proposal involved the development of new software to allow increased surveillance and oversight of the Day-Ahead Energy Market. The new software (called Case Snapshot) allows the re-execution of the Day-Ahead Energy Market's Reserve Adequacy Assessment and Security Constrained Reliability Assessment cases using the same market data that existed when the original case was executed and approved.

The initial development and implementation of Case Snapshot occurred at the end of October 2013. Enhancements to augment the data captured in the snapshot tables and the data retention period were subsequently made. On December 22, 2014, ISO-NE reported that the initial implementation was complete at a total project cost of \$672,500.

ISO-NE is now proposing to use the remaining funds to develop a suite of user interface displays that will provide visibility of the snapshot data when re-running a case and allowing the ability to modify this data, including participant offers, before executing the case. In addition, this will facilitate the execution of "what-if" scenarios. Currently, for much of the snapshot data, this can only be achieved using database queries and manual database edits. It is ISO-NE's expectation that the remaining funding from the settlement will cover most but not all of the costs of developing and implementing the enhancements.

The targeted completion date for this project is the fourth quarter of 2016.

Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Price Responsive Demand

\$0.1M

The Price Responsive Demand Project aims to fully integrate demand response into the wholesale markets. The project will include creating a dispatchable capacity product for demand response, the application of Peak Energy Rents and performance penalties to demand response creating incentives to not economically or physically withhold their capacity. In addition, the project will provide a mechanism for capacity replacement for resources that are not able to demonstrate their obligated capacity. Due to the uncertainty surrounding FERC Order 745, this is a preliminary estimate for work anticipated for 2016.

The targeted completion date for this project is the third quarter of 2018.



Capital Budget

2016 Expenditures/Major Projects in Conceptual Design *(cont.)*

Non-Project Capital Expenditures

\$3.7M

Non-Project capital expenditures fund external and internal capitalized labor necessary to program System Improvement Requests (\$2.0M), non-project related hardware purchases (\$1.5M), and furniture & fixtures (\$0.2M). System Improvement Requests to improve settlement accuracy are captured as part of this effort.

Other Emerging Work

\$2.2M

This category is primarily intended to deal with emerging work requests during 2016 that result from operational needs, compliance obligations or stakeholder feedback.

Capital Budget

ISO New England Inc.
2016 Capital Projects Schedule

<u>Description</u>	<u>Project-To- Date</u>	<u>Current Year (2015) Cost to Complete [1]</u>	<u>2016 Cost to Complete</u>	<u>Total Project Costs</u>	<u>Estimated Complete Date</u>
Capital Projects - Approved Charters					
. Wind Integration Phase II / Do Not Exceed (DNE) Dispatch	\$ 423.5	\$ 2,445.2	\$ 2,272.0	\$ 5,140.7	5/2016
. Divisional Accounting	2,054.8	249.2	496.8	2,800.8	2016
. Forward Capacity Auction (FCA) 10	522.7	1,602.3	590.0	2,715.0	5/2016
. Zonal Load Forecast	44.3	478.7	157.0	680.0	3/2016
. Internet Explorer 11 Upgrade	60.4	220.4	21.2	302.0	12/2015
Sub Total Projects with Approved Charters	3,105.7	4,995.8	3,537.0	11,638.5	
Planning/Conceptual Design [2]					
. Forward Capacity Auction (FCA) 11	-	-	3,000.0	3,000.0	TBD
. Sub-hourly Settlements	-	-	2,500.0	2,500.0	TBD
. Fast Start Pricing	-	-	2,500.0	2,500.0	TBD
. Submission of Financial Transmission Rights (FTR) for Clearing	-	-	1,800.0	1,800.0	TBD
. 2016 Issues Resolution Project	-	-	1,500.0	1,500.0	TBD
. Long-term FTRs	907.5	-	-	907.5 [3]	TBD
. Expand Energy Offers for Pumps	-	-	900.0	900.0	TBD
. Quarterly Release Projects 2016	-	-	800.0	800.0	TBD
. Asset Characteristics Database & User Interface Re-design	0.2	39.8	700.0	740.0	TBD
. Energy Management Platform Customs Elimination	-	-	600.0	600.0	TBD
. Operations Documents Management System	-	-	600.0	600.0	TBD
. Transmart Rewrite	-	-	500.0	500.0	TBD
. Web Enhancements 2016	-	-	500.0	500.0	TBD
. Asset Registration Automation	26.4	31.3	500.0	557.7	TBD
. Dynamic Interchange Adjustment Tool	-	-	300.0	300.0	TBD
. Oracle 12c Upgrade	14.4	35.6	100.0	150.0	TBD
. Case Snapshot Enhancements for Market Operators Interface	-	-	100.0	100.0	TBD
. Price Responsive Demand	-	-	100.0	100.0	TBD
. Other Emerging Work Projects	-	-	2,263.0	2,263.0	TBD
Sub Total Conceptual Design	948.4	106.8	19,263.0	20,318.2	
. Non-Project Capital Expenditures	-	-	3,700.0	3,700.0	
. Capitalized Interest and Loan Fees	-	-	500.0	500.0	
Total Capital Projects (Including Capitalized Interest)	\$ 4,054.1	\$ 5,102.6	\$ 27,000.0	\$ 36,156.7	

[1] The amounts under the "Current Year (2015) Cost to Complete" list only includes those projects with budgeted costs in 2016 and beyond.

[2] The 2016 Budget for Projects in Planning and Conceptual Design is not final. Once the project scope and timeline have been determined the budget will be finalized.

[3] The LTTR project has been indefinitely deferred pending the development of appropriate credit requirements.

CAPITAL STRUCTURE

Capital Structure

- The Company has a \$20M working capital line, which expires in June 2018.
- Capital costs are largely funded by \$50M in Private Placement Notes. The Company has funded the capital needs with a \$39M tranche of Private Placement Notes entered into in 2013, which were funded in 2014, and replaced notes that expired in September 2014 and \$11M Private Placement Notes entered into in 2013, both of which also expire in November 2024.
- Tax-Exempt Debt
 - In 2005, the Company entered into tax-exempt financing in the form of Multi-Mode Variable Rate Civic Facility Revenue Bonds to fund the construction of the Main Control Center in Holyoke, MA.
 - In 2012, the Company entered into a new tax-exempt financing in the form of Multi-Mode Variable Rate Civic Facility Revenue Bonds for \$36M to fund a new Backup Control Center.
 - The tax-exempt bonds are auctioned weekly.
- In November 2013, the Company entered into an Interest Rate Cap (to mitigate the interest rate risks associated with the tax-exempt debt) for the notional value of \$32,215,000, which will expire in 2024 and amortizes as principal payments are made on the tax-exempt debt.
- For the six months ended June 30, 2015, ISO-NE's total weighted average cost of capital was 1.82%.

CASH FLOW

ISO New England - Sources and Uses of Cash (\$000's)

ISO New England 2015 - 2019 Debt Service Cash Flow

	2015 Forecast	2016 Budget	2017 Forecast	2018 Forecast	2019 Forecast
Cash flows from operating activities:					
Operating Cost Recovery *	\$ 136,024	\$ 149,049	\$ -	\$ -	\$ -
Non Cash Items:					
Depreciation & Loss on Disposals	30,027	32,943	36,133	35,675	33,649
Amortization Land	54	54	39	39	39
Amortization Term Loan Fees	149	145	145	145	145
Chg in Accrued Expenses & Deferred Revenue-Depreciation	1,684	-	-	-	-
Interest Expense	(2,102)	(2,389)	-	-	-
Operating Expenses *	(145,662)	(149,745)	-	-	-
Net cash provided by operating activities	20,174	30,057	36,317	35,859	33,833
Cash flows from investing activities:					
Capital expenditures	(28,000)	(27,000)	(27,000)	(27,000)	(27,000)
Net cash used in investing activities	(28,000)	(27,000)	(27,000)	(27,000)	(27,000)
Cash flows from financing activities:					
Proceeds/(Repayment) - Revolving Credit Line	4,500	-	(4,500)	-	-
Repayment of Principal - Tax Exempt Bonds	(3,180)	(3,180)	(3,180)	(3,180)	(3,180)
Net cash provided by (used by) financing activities	1,320	(3,180)	(7,680)	(3,180)	(3,180)
Net increase/(decrease) in cash	(6,506)	(123)	1,637	5,679	3,653
Cash & Cash Equivalents on Hand - Beginning of Period	6,702	196	73	1,710	7,389
Change in Cash & Cash Equivalents Available	(6,506)	(123)	1,637	5,679	3,653
Cash & Cash Equivalents on Hand - End of Period	\$ 196	\$ 73	\$ 1,710	\$ 7,389	\$ 11,042
Debt Maturity Schedule					
Tax Exempt Bond - BCC	1,360	1,360	1,360	1,360	1,360
Tax Exempt Bond - MCC	1,820	1,820	1,820	1,820	1,820
Total Year Repayment	\$ 3,180	\$ 3,180	\$ 3,180	\$ 3,180	\$ 3,180

*= Operating Cost Recovery for 2015 has decreased by an overcollection in 2013 of \$9,779.9, which was not amortized in 2014 but included in the 2015 tariff. The overcollection from 2014 of \$621.7 will be filed in the 2016 tariff and will be reflected in the Operating Cost Recovery for 2016. The Operating Cost Recovery for 2017-2019 is projected to offset Operating Expenses for 2017-2019. The Operating Cost Recovery amount for 2017-2019 has not yet been established at this point.

2016-2019 PRO-FORMA STATEMENTS

2016 - 2019 Pro-Forma Budgets

(Dollars in Millions)	2016	2017	2018	2019
Operating Budget ^{(1) (2)}	\$152.3	\$158.5	\$163.2	\$168.1
Capital Project Budget	\$27.0	\$27.0	\$27.0	\$27.0
Total	\$179.3	\$185.5	\$190.2	\$195.1
Operating ⁽¹⁾	\$152.3	\$158.5	\$163.2	\$168.1
Depreciation ⁽¹⁾	\$33.0	\$36.2	\$35.7	\$33.7
True-Up	\$(0.6)	\$(0.7)	\$(1.0)	\$(1.0)
Revenue Requirement	\$184.7	\$194.0	\$197.9	\$200.8
TWh Forecast ⁽³⁾	139.6	141.1	142.6	143.9
\$/KWh Rate	\$0.00132	\$0.00137	\$0.00139	\$0.00140

- (1) 2016 – 2019 assumes an inflationary increase in Operating costs, however, there is no inflationary increase for interest expense and interest income, and the budgets do not contemplate new mandated activities.
- (2) Cyber security costs may exceed the inflationary rate.
- (3) For 2016 – 2019, the May 2015 CELT Report was used.

APPENDIX 1: 2013 AND 2014 ACTUAL TO BUDGET VARIANCE ANALYSIS

ISO New England Actual-to-Budget Variance Analysis for 2013 and 2014

The following pages provide actual-to-budget variance analysis for 2013 and 2014. The information provided includes overall results, a table that breaks down salary into base salaries and wages, overtime wages, incentive or bonus payments, and each employee benefit program with an annual cost greater than \$200,000. Professional fees and consultant costs are stated separately by department, and an explanation is provided for each variance in excess of \$1,000,000.

Amounts in the tables below are in thousands.

2013 (Overall Results)

<u>Description</u>	Actual 2013 Expense	Approved Budget 2013	Incr/(Decr)
Operating Expense			
Salaries and Burden	\$ 92,497.7	94,581.2	\$ (2,083.5)
Professional Fees & Consulting	10,567.4	9,187.0	1,380.4
Professional Fees & Consulting - Legal	2,994.2	3,772.0	(777.8)
Building Services	1,887.5	1,961.5	(74.0)
Rents & Leases	498.0	551.3	(53.3)
Network Operations	1,806.6	2,043.4	(236.8)
Computer Services	7,548.6	7,612.2	(63.6)
Data Services & Office Expenses	1,120.8	1,190.3	(69.5)
Insurance Expense	1,796.3	1,888.0	(91.7)
Board of Directors Expense	1,112.0	1,159.5	(47.5)
Meeting & Related Expense	1,241.7	1,438.2	(196.5)
Education & Training	1,109.8	1,106.5	3.3
Taxes, Permits, Licenses & Fees	188.0	196.7	(8.8)
Total Operating Expense	124,368.6	126,687.9	(2,319.3)
Interest Inc, Purch Disc, Misc.	(661.9)	(647.4)	(14.5)
Operating Expense net of Revenue	123,706.7	126,040.5	(2,333.8)
CEO Emerging Work Allowance	-	1,100.0	(1,100.0)
Board Contingency	-	700.0	(700.0)
NPCC Dues	5,055.8	5,055.8	0.0
Interest Expense	2,657.1	2,661.3	(4.2)
Net Expense Before Depreciation	131,419.6	135,557.7	(4,138.0)
Depreciation Expense	24,923.3	28,439.3	(3,516.0)
Gain/Loss on Fixed Asset Disposal	378.9	45.0	333.9
Total Depreciation and Debt Services	25,302.2	28,484.3	(3,182.1)
Total Expense for ACT Recovery	\$ 156,721.8	\$ 164,041.9	\$ (7,320.1)

2013 (Salaries & Burden)

<u>Description</u>	Actual 2013 Expense	Approved Budget 2013	Incr/(Decr)
Salaries and Wages - Base	\$ 56,603.2	58,277.5	\$ (1,674.4)
Salaries and Wages - Overtime	2,293.2	2,362.8	(69.7)
Salaries and Wages - Incentive/Bonus	9,408.1	9,513.1	(105.0)
Employee Benefits - Pension	9,407.5	9,423.1	(15.6)
Employee Benefits - Post-Ret Benefits	1,107.6	1,194.6	(87.0)
Employee Benefits - Health Insurance	5,929.0	6,081.4	(152.4)
Employee Benfits - Dental Insurance	463.2	458.9	4.3
Employee Benfits - 401(K) Match	2,271.1	2,278.9	(7.8)
Salary Burden - Payroll Taxes	4,529.4	4,543.8	(14.4)
Other Benefit/Burden < \$200K	485.3	446.9	38.4
Total Salaries & Burden Expense	92,497.6	94,581.1	(2,083.5)

2013 (Professional Fees)

Department	Actual 2013 Expense	Approved Budget 2013	Incr/(Decr)
System Operations	\$ 197.3	\$ 365.1	\$ (167.8)
System Planning	1,890.5	1,184.8	705.7
Market Operations	542.6	617.5	(74.9)
Program Management Office	375.5	311.0	64.5
Information Technology	1,732.7	1,630.3	102.4
Market Development	1,158.3	194.0	964.3
Human Resources	1,787.9	1,558.1	229.8
Finance Operations	422.7	590.7	(168.0)
Internal Audits	587.4	554.9	32.5
Corp Comm and External Affairs	567.5	635.7	(68.2)
All Other	1,305.0	1,545.0	(240.0)
Total	10,567.4	9,187.0	1,380.4
Legal Professional Fees	2,994.2	3,772.0	(777.8)
Total Professional Fees	\$ 13,561.6	\$ 12,959.0	\$ 602.6

2013 Actual vs. Budget variance explanations for items > \$1,000,000

- The Salary and Wages – Base for 2013 was an under spend of \$1,674,400. Several factors contributed to this under spend including higher than planned vacancy. The average vacancy rate for 2013 was 4.5% vs. a budgeted vacancy rate of 2.5%. Another contributing factor was lower than budgeted salary rates – primarily due to replacement of retiring employees in System Operations at lower salaries, in addition to various other departments where new employees were hired at lower salaries than budget. Finally, the ISO paid out less merit and promotional increases than planned.
- Because ISO-NE is a non-profit organization with no equity available there is \$1,100,000 of funds (the “CEO Emerging Work Allowance”) built into the budget to cover unknown or unforeseen costs that emerge during the year. Additional funding needs can be created as a result of refined estimates for work, new activities, or changes in accounting estimates. Similarly, to the extent that these changes result in an “under” expenditure, the CEO Emerging Work Allowance is increased. Requests for funds from the Emerging Work Allowance are reviewed by senior management, and require CFO and CEO approval prior to the spending authorization. No actual amounts are charged to this line item as it is only used for budget/forecast purposes.
- Professional Fees & Consulting spending was \$1,380,400 higher than the approved 2013 budget. Increases include significant work in the Market Monitoring area for the Forward Capacity Market (FCM) and related Forward Capacity Auction. This included work to develop a new Offer-floor mitigation mechanism, review/modification of models used to evaluate de-list bids from generating resources and demand resources, development of an Offer Trigger Price model, and work to develop a model to estimate expected range of Next-day and Intra-day gas prices.

System Planning had increased Professional Fees for work to assess the impacts of natural gas issues on the New England Control area, including an overall assessment, impacts of ISO New England’s Energy Efficiency Forecast on natural gas scenarios, and the duration of risk for the Electric Sector from Natural Gas Sector Constraints. Additional System Planning Professional Fees included work for FCM process improvements and documentation development. Funding was also included for Load Forecasting consultant work to cover for prolonged employee vacancy in this area, in addition to work for modifications to a Least-Cost, Security-Constrained Unit Commitment and Economic Dispatch Program used by System Planning.

Market Development utilized a consultant to identify qualitative and quantitative impacts associated with potential market rule changes proposed to address natural gas

dependence risk. Information Technology had consulting support in various areas, including: assistance in a new IT Asset & License Management department to help get the program off the ground, complete an assessment and provide findings for an Asset Management System; and funding for a Security Program Maturity Assessment commissioned by the VP of Information Technology to measure the potential exposure from gaps with the current security program design.

Human Resources had increased Professional Fees, including: consulting in the development of a new Defined Contribution Pension Plan; funding for an Executive Search for a replacement of the ISO's Vice President of Market Monitoring; and Recruiter Fees and funding of a temporary outside recruiter as a result of the ISO's internal recruiter position being vacant for a majority of the year.

- Depreciation expense ended the year at \$3,516,000 less than the original budget. The depreciation decrease is due in part to reduced capital spending in 2013 on projects such as: Business Continuity Enhancements Phase III and Strategic Initiatives as well as delays in the in-service dates of other capital projects (e.g. Wind Integration and NX9/NX12 Data Integration & Automation) as project charters and more refined timelines were established. These changes added to the reduction in depreciation costs.

2014 (Overall Results)

<u>Description</u>	Actual 2014 Expense	Approved Budget 2014	Incr/(Decr)
Operating Expense			
Salaries and Burden	\$ 94,139.5	95,723.2	\$ (1,583.8)
Professional Fees & Consulting	10,293.6	9,984.2	309.4
Professional Fees & Consulting - Legal	2,508.2	3,210.0	(701.8)
Building Services	2,500.4	3,095.4	(595.1)
Rents & Leases	847.7	1,002.3	(154.7)
Network Operations	1,979.2	2,047.6	(68.4)
Computer Services	9,853.0	8,583.1	1,269.9
Data Services & Office Expenses	1,143.8	1,178.8	(35.0)
Insurance Expense	1,879.5	2,011.3	(131.8)
Board of Directors Expense	1,172.2	1,170.4	1.8
Meeting & Related Expense	1,293.6	1,526.1	(232.5)
Education & Training	1,168.6	1,234.7	(66.0)
Taxes, Permits, Licenses & Fees	178.1	342.7	(164.6)
Total Operating Expense	128,957.4	131,109.9	(2,152.5)
Interest Inc, Purch Disc, Misc.	(530.5)	(459.9)	(70.7)
Operating Expense net of Revenue	128,426.8	130,650.0	(2,223.2)
CEO Emerging Work Allowance	-	1,100.0	(1,100.0)
Board Contingency	-	700.0	(700.0)
NPCC Dues	5,388.2	5,322.6	65.6
Interest Expense	2,994.6	3,145.3	(150.7)
Net Expense Before Depreciation	136,809.6	140,918.0	(4,108.4)
Depreciation Expense	25,831.6	28,346.2	(2,514.6)
Gain/Loss on Fixed Asset Disposal	77.7	60.0	17.7
Total Depreciation and Debt Services	25,909.3	28,406.2	(2,496.9)
Total Expense for ACT Recovery	\$ 162,719.0	\$ 169,324.2	\$ (6,605.2)

2014 (Salaries & Burden)

<u>Description</u>	Actual 2014 Expense	Approved Budget 2014	Incr/(Decr)
Salaries and Wages - Base	\$ 60,205.0	60,365.1	\$ (160.1)
Salaries and Wages - Overtime	2,460.4	2,466.9	(6.5)
Salaries and Wages - Incentive/Bonus	9,585.6	9,786.7	(201.1)
Employee Benefits - Pension	6,769.5	7,590.5	(820.9)
Employee Benefits - Post-Ret Benefits	709.5	1,040.6	(331.0)
Employee Benefits - Health Insurance	6,380.0	6,392.1	(12.2)
Employee Benefits - Dental Insurance	439.4	495.7	(56.3)
Employee Benefits - 401(K) Match	2,391.8	2,428.9	(37.0)
Salary Burden - Payroll Taxes	4,722.3	4,711.5	10.8
Other Benefit/Burden < \$200K	475.9	445.3	30.7
Total Salaries & Burden Expense	94,139.5	95,723.2	(1,583.7)

2014 (Professional Fees)

Department	Actual 2014 Expense	Approved Budget 2014	Incr/(Decr)
System Operations	\$ 177.5	\$ 338.0	\$ (160.5)
System Planning	1,856.7	1,468.7	388.0
Market Operations	307.4	550.2	(242.8)
Program Management Office	134.6	0.0	134.6
Information Technology	2,214.1	1,862.4	351.8
Market Development	1,120.0	194.0	926.0
Human Resources	1,755.1	1,410.5	344.6
Finance Operations	547.8	455.0	92.8
Internal Audits	777.2	632.8	144.4
Corp Comm and External Affairs	624.7	632.8	(8.1)
All Other	778.6	2,440.0	(1,661.4)
Total	10,293.6	9,984.2	309.4
 Legal Professional Fees	 2,508.2	 3,210.0	 (701.8)
Total Professional Fees	\$ 12,801.8	\$ 13,194.2	\$ (392.4)

2014 Actual vs. Budget variance explanations for items > \$1,000,000

- Employee Benefits – Pension for 2014 was lower than the original budget by \$820,900 due to an increase in the discount rate used to calculate the expense.
- Employee Benefits – Postretirement Benefits were lower than the original budget by \$331,000 due, also, to an increase in the discount rate used to calculate the expense.
- While the overall variance in the Professional Fees line (excluding Legal) was less than \$1,000,000, the Department line “All Other” did have a variance of \$1,661,400. During the 2014 budget cycle, funds allocated for Strategic Planning and other initiatives including FERC Order 1000, Impact Analysis, Intra-Day Offers, and Cyber Security Risks were included in the “All Other” line. Once the specific scope and deliverables of the work to be performed is determined and approval is granted, the funding for the project is moved to the specific department responsible for managing the work.
- Computer Service costs were \$1,269,900 above the original budget. Increases include additional funding for software licensing fees primarily related to our application back-up system that is being replaced in 2015. Funding was also allocated to fund additional Oracle licenses due to user growth of market participants. Additional increases include software maintenance contracts resulting from fourth quarter purchases in 2013 which were unknown at the time of the original budget and increases for new license purchases due to IT infrastructure and user growth. These increases were partially offset by a reduction for open source software license fees as well as software maintenance contracts which will not renew until 2015. Savings were also realized as a result of discounts received on mobile application and content management system software.
- Because ISO-NE is a non-profit organization with no equity available there is \$1,100,000 of funds (the “CEO Emerging Work Allowance”) built into the budget to cover unknown or unforeseen costs that emerge during the year. Additional funding needs can be created as a result of refined estimates for work, new activities, or changes in accounting estimates. Similarly, to the extent that these changes result in an “under” expenditure, the CEO Emerging Work Allowance is increased. Requests for funds from the Emerging Work Allowance are reviewed by senior management, and require CFO and CEO approval prior to the spending authorization. No actual amounts are charged to this line item as it is only used for budget/forecast purposes.
- Depreciation expense was lower by \$2,514,600 as a result of changes in capital project in service dates and project expenditures compared to assumptions used in the original budget. The following capital projects with these types of changes include: Divisional

Accounting and Energy Market Offer Flexibility (Hourly Market), the Alternative Technologies and Regulation Market project, the 2014 Issues Resolution Project, Generation Auditing – Claims 10/30, Pre-requisite Unit Dispatch & Scheduling Changes for Generation Control Application, and the Simultaneous Feasibility Test and Market System Upgrade project.

APPENDIX 2: ISO/RTO COMPARISON



Financial Results Summary

ISO/RTO Financial Summary - 2014 Actual Results

Operating Expense and Capital Expenditures for Calendar Year 2014, and Outstanding Debt as of December 31, 2014 ⁽¹⁾

(Amounts in Millions)

	ISO-NE ⁽²⁾	NYISO	CAISO	IESO ⁽³⁾⁽⁴⁾	PJM	MISO	SPP	ERCOT
Operating Expense - 2014	\$ 163.1	\$ 174.3	\$ 214.4	\$ 165.9	\$ 330.4	\$ 310.3	\$ 210.3	\$ 178.8
Less: Amortization & Depreciation	(25.8)	(26.7)	(39.7)	(19.5)	(57.1)	(50.0)	(51.0)	(26.6)
Regulatory Fees	(5.4)	(12.3)	-	-	(55.4)	(41.0)	(16.3)	(14.4)
Grant Expenses	-	(3.8)	-	-	-	-	-	-
Net Operating Expense - 2014	\$ 131.9	\$ 131.6	\$ 174.8	\$ 146.4	\$ 217.9	\$ 219.3	\$ 142.9	\$ 137.8
Other Financial Data								
Capital Expenditures for 2014	\$ 33.5	\$ 24.6	\$ 26.0	\$ 22.9	\$ 31.1	\$ 46.5	\$ 23.6	\$ 23.9
Outstanding Debt as of 12/31/2014	\$ 115.4	\$ 104.6	\$ 201.6	\$ 90.0	\$ 47.8	\$ 200.0	\$ 272.3	\$ 71.0
Actual full-time equivalent headcount as of 12/31/2014	567.5	533.0	587.0	457.5	671.0	838.0	572.0	682.0

(1) Applicable amounts were taken from each entity's 2014 audited financial statements

(2) ISO-NE Amortization & Depreciation and Capital Expenditures are presented on a cash-flow basis

(3) Amounts are in Canadian dollars

(4) IESO excludes regional System Planning function and costs which were provided by Ontario Power Authority during 2014

ISO/RTO Service Comparison

Service	ISONE	NYISO	IESO	PJM	MISO (1)	CAISO	ERCOT	AESO	SPP
Bilateral Transactions	Y	Y	Y	Y	Y	Y	Y	Y	Y
Real-time energy market	Y	Y	Y	Y	Y	Y	Y	Y	Y
Locational price	Y	Y	N	Y	Y	Y	Y	N	Y
Hourly price	Y	Y	Y	Y	Y	Y	Y	Y	Y
Congestion price	Y	Y	N	Y	Y	Y	Y	N	Y
Losses price	Y	Y	N	Y	Y	Y	Y	N	Y
Day-ahead energy market	Y	Y	N	Y	Y	Y	Y	N	Y
Locational price	Y	Y	N	Y	Y	Y	Y	N	Y
Hourly price	Y	Y	N	Y	Y	Y	Y	N	Y
Congestion price	Y	Y	N	Y	Y	Y	Y	N	Y
Losses price	Y	Y	N	Y	Y	Y	Y	N	Y
Ancillary services market	Y	Y	Cost	Y	Y	Y	Y	Cost	Y
Regulation services market	Y	Y	Cost	Y	Y	Y	Y	Y	Y
Operating reserves market	Y	Y	Y	Y	Y	Y	Y	Y	Y
Voltage support service	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost
Black start market	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	N
Financial transmission rights	Y	Y	Y	Y	Y	Y	Y	N	Y
Capacity market	Y	Y	N	Y	Y ⁽¹⁾	N	N	N	N
Regional economic dispatch	Y	Y	Y	Y	Y	Y	Y	N	Y

Note: Information as of July 2015

(1) MISO has a voluntary capacity market



ISO/RTO Service Comparison *(cont.)*

Service	ISONE	NYISO	IESO	PJM	MISO (1)	CAISO	ERCOT	AESO	SPP
Settlements and billing	Y	Y	Y	Y	Y	Y	Y	Y	Y
Virtual bidding	Y	Y	N	Y	Y	Y	Y	N	Y
Balancing Authority	Y	Y	Y	Y	Y	Y	Y	Y	Y
Interchange Authority	Y	Y	Y	Y	Y	N	Y	N	Y
Planning Authority	Y	Y	Y	Y	Y	Y	Y	Y	Y
Resource Planner	Y	Y	Y	Y	N	N	Y	N	N
Reliability Coordinator	Y	Y	Y	Y	Y	N	Y	N	Y
Transmission Operator	Y	Y	Y	Y	N	Y	Y	Y	N
Transmission Planner	Y	Y	Y	Y	N	N	Y	Y	Y
Transmission Service Provider	Y	Y	Y	Y	Y	Y	Y	N	Y

Note: Information as of July 2015

(1) MISO has a voluntary capacity market



APPENDIX 3:

ISO NEW ENGLAND 2016 – 2020 BUSINESS PLAN



2016-2020 Business Plan

Our Business

ISO New England is an independent, not-for-profit corporation created in 1997 to oversee New England's bulk electric power system, which serves the electricity needs of 14 million people within Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

As a regional transmission organization (RTO), ISO New England meets the electricity demands of the region by fulfilling three primary responsibilities:

- Operate New England's bulk electric power system, economically dispatching and directing the generation and flow of electricity minute-to-minute across the region's interstate high-voltage transmission lines, thereby ensuring the constant availability of electricity for consumers.
- Develop, oversee, and administer New England's competitive wholesale electricity markets that provide reliability and efficiency benefits for consumers.
- Manage comprehensive, long-term bulk electric power system planning that considers and incorporates federal and state policies.

Each of these responsibilities is achieved through and supported by numerous services the ISO provides to ensure New Englanders have reliable, competitively-priced electricity today and into the future.

Our Business Planning Process

ISO New England fully supports the desire of regional market participants and state and federal officials to ensure that ISO business operations provide value, are cost effective, and include processes that are open and visible to the public. Accordingly, the ISO's business planning process incorporates extensive and robust input from market participants and state officials.

The process begins in April with a strategic planning process through which ISO New England's Board of Directors and Senior Management define objectives for the company over the next five years, as well as the projects and activities the company must fulfill to achieve those objectives. The ISO turns these objectives, projects, and activities into a draft business plan.

During the spring and summer, ISO New England discusses the high-level business plan with the New England Conference of Public Utilities Commissioners, the New England States Committee on Electricity, other state officials, and the New England Power Pool (NEPOOL).

The ISO then reviews the projects and activities identified for the next five years and aligns the projects and activities for the coming year (2016) with funding amounts to produce an annual budget estimate. This ensures that resources are available to carry out the coming year's priorities.

Every August, the resulting operating and capital budget is brought before the Audit and Finance

Committee of the ISO's Board of Directors, the NEPOOL Budget and Finance Subcommittee, and New England state representatives and officials for review and input. In September, NEPOOL and the ISO Board again deliberate the budget. Then, in October, the NEPOOL Participants Committee conducts an advisory vote, and the ISO Board, after considering all input received, approves and/or modifies the budget and business plan.

No later than November 1, the ISO files its budget with the Federal Energy Regulatory Commission (FERC) for approval, with an effective date of January 1 (see full list of dates on next page). After FERC approves the budget, the ISO develops a detailed work plan for the year, consistent with its budget and business plan. This document is also shared with NEPOOL and state officials. Beginning in 2015, the ISO intends to update the detailed work plan (which looks out over a two year period) on a quarterly basis, such that it is available as an additional reference for stakeholders during their budget deliberations.



The following pages present ISO New England's draft business plan for the next five years. Based on feedback from NEPOOL and state officials over the next few months, the ISO will finalize the business plan and develop a proposed budget to satisfy the first year of that plan.

Our Business Planning Objectives

To begin its business planning process, ISO New England identified objectives the company must realize over the next five years to successfully fulfill its primary responsibilities.

New England's bulk power system is reliable in both the short- and long-term and the wholesale electricity markets are competitive and efficient.

This objective would be measured a success if:

- The bulk power system is robust and meets reliability criteria of the North American Electric Reliability Corporation (NERC) and the Northeast Power Coordinating Council (NPCC).
- Reliability risks posed by an inadequate gas infrastructure are mitigated.
- An effective planning process, documented in the annual *Regional System Plan*, identifies appropriate investments to address mandatory reliability criteria and other criteria determined by policymakers.
- Resource adequacy is achieved through the Forward Capacity Market (FCM), and the power

system's resource characteristics support reliable operations.

- The efficiency of the power system is improved through planning and Smart Grid initiatives.
- The wholesale electricity market design is improved and market seams are reduced.
- Competitiveness and efficiency of the wholesale markets are demonstrated through internal and external market monitor reports and FERC assessments.
- The information technology upon which the ISO relies is protected from cyber-attack

RTO business operations are well-managed, cost-effective, and responsive to New England's market participants, state officials, and other electricity stakeholders.

This objective would be measured a success if:

- Administrative and operational costs are controlled.
- A quality workforce is maintained.
- ISO New England supports the stakeholder process.
- ISO New England exhibits a culture of commitment to quality, compliance, and continuous improvement as defined by the following attributes:
 - ISO New England services are of excellent quality.
 - Information is transparent.
 - Stakeholder interactions are robust and include substantive communications.
 - ISO New England is an independent, credible source of expertise and decision-making with regard to the wholesale markets and the bulk power system.
 - ISO New England operates in compliance with its tariff and NERC and NPCC standards.

Our Business Plan

From these objectives, ISO New England formed the five-year business plan. The following pages present the high-level activities the ISO identified for 2016 through 2020. The detailed tasks and projects consistent with these activities are captured in the *Wholesale Markets Project Plan*, the *Regional System Plan*, and the annual business plan/budget.

ISO New England's Five-Year Business Plan

Reliable Bulk Power System and Efficient Wholesale Markets	
Objective	Project/Activity
The bulk power system is robust and meets reliability criteria of NERC and NPCC	Implement mandatory NERC and NPCC reliability standards and FERC orders Enhance resource performance and flexibility through energy and ancillary market design enhancements and performance incentives Ensure robust operating plan to maintain reliability in NEMA/Boston during the 2016 summer peak

Reliability risks posed by an inadequate gas infrastructure are mitigated	Enhanced performance incentives in the Forward Capacity Market implemented from FCA 9 onwards Implement winter programs until FCM Pay for Performance is effective in June 2018 Improved Gas-Electric coordination
An effective planning process, documented in the annual <i>Regional System Plan</i> , identifies appropriate investment to address mandatory reliability criteria and other criteria determined by policymakers	Evaluate system needs and identify reliability projects through the <i>Regional System Plan</i> Monitor progress of <i>Regional System Plan</i> reliability projects Revise the planning process to include Public Policy Projects per FERC Order 1000, including the effects of distributed resources Enhance the planning process to provide better information regarding the tradeoffs among competing options to address reliability needs
Resource adequacy is achieved through the Forward Capacity Market, and the power system's resource characteristics support reliable operations	Enhance FCM design, specifically zonal pricing and local capacity requirements
The efficiency of the power system is improved through planning and Smart Grid initiatives	Increase situational awareness via improved visualization technology Participate in developing Smart Grid standards Integrate demand and renewable/variable resources into ISO operations while ensuring reliability
The wholesale electricity market design is improved and market seams are reduced	Implement initiatives identified in the <i>Wholesale Markets Project Plan</i> to improve energy and ancillary services markets Reduce out-of-market costs by improving energy price formation Develop plans to integrate Price Response Demand in wholesale markets, (dependent on Supreme Court and/or FERC direction regarding Order 745) Implement Coordinated Transaction Scheduling with NYISO
Competitiveness and efficiency of the wholesale markets are demonstrated through internal and external market monitor reports and FERC assessments	Maintain and, as appropriate, improve the New England market monitoring structure in accordance with FERC directives

RTO business operations are well-managed, cost-effective, and responsive to New England's market participants, state officials, and electricity stakeholders	
Objective	Project/Activity
Administrative and operational costs are controlled	Continue robust review of budget by market participants and state officials
A quality workforce is maintained	Recruit high-quality candidates for the organization's short- and long-term needs Maintain competitive compensation and benefits Ensure employees receive ongoing feedback and are provided with skill and career development Design and implement additional technical career tracks Ensure leadership succession plans are current
The information technology upon which the ISO relies is protected from cyber-attack	Monitor threats and implement appropriate cyber-security measures to identify, protect, detect, respond, and recover from cyber threats
ISO New England exhibits a culture of commitment to quality, compliance, and continuous improvement: ISO New England services are of excellent quality Information is transparent Stakeholder communications are robust ISO New England is an independent, credible source of expertise and decision-making with regard to the wholesale markets and the bulk power system ISO New England operates in compliance with its tariff and NERC and NPCC standards	Deliver timely, accurate settlements of the markets Continue successful project execution and the delivery of agreed-to services Sustain commitment to quality through successful SSAE16 Audits (SOC 1 Report), unqualified NERC and NPCC audits, and a well-functioning Quality and Risk Management System Release timely, quality wholesale market data, annual <i>Regional System Plan</i> , and market monitoring report Continually update and enhance the internal and external websites Deliver an open and fair stakeholder process Provide quality education and training to market participants and state officials on the wholesale markets and inform them of the implications of long-term resource alternatives Uphold independent governance and code of conduct Provide quantitative and qualitative analysis for major ISO initiatives Maintain an effective compliance management system