

MINUTES OF THE REGULAR MEETING OF THE NYPA AUDIT COMMITTEE

December 12, 2017

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Minutes of the regular meeting of the New York Power Authority's Audit Committee held at the Clarence D. Rappleyea Building, White Plains, New York, at approximately 9:22 a.m.

The following Members of the Audit Committee were present:

Trustee Eugene Nicandri, Chairman Trustee John R. Koelmel Trustee Anne M. Kress Trustee Michael Balboni

Trustee Tracy McKibben - Excused Trustee Anthony Picente, Jr. - Excused Trustee Dennis Trainor - Excused

Also in attendance were:

Gill Quiniones President and Chief Executive Officer

Justin Driscoll Executive Vice President and General Counsel

Kristine Pizzo Senior Vice President - Human Resources & Enterprise

Shared Services

Karen Delince Vice President and Corporate Secretary

Joseph Gryzlo Vice President and Chief Ethics and Compliance Officer

Angela Gonzalez Director - Internal Audit - Technology
Lorna Johnson Senior Associate Corporate Secretary
Sheila Quatrocci Senior Assistant Corporate Secretary

Gottor, Jaiah Manager - Network Services

Joseph Rivera Network Architect
Glen Martinez Senior Network Analyst

Chairman Eugene Nicandri presided over the meeting. Corporate Secretary Delince kept the Minutes.

Introduction

Chairman Nicandri welcomed committee members and senior staff to the meeting. He said the meeting had been duly noticed as required by the Open Meetings Law and called the meeting to order pursuant to section B(4) of the Audit Committee Charter.

1. Adoption of the Proposed Meeting Agenda

Upon motion made by Trustee Kress and seconded by Trustee Koelmel, the agenda for the meeting was adopted.

2. CONSENT AGENDA:

Upon motion made by Trustee Kress and seconded by Trustee Koelmel, the Consent Agenda was approved.

a. Approval of the Minutes of the Regular Meeting held on September 26, 2017

Upon motion made and seconded, the Minutes of the Committee's Regular Meeting held on September 26, 2017 were approved.

b. Amendments to the Authority's Audit Committee Charter

The Executive Vice President and General Counsel submitted the following report:

"SUMMARY

The Audit Committee is requested to adopt the Authority's Audit Committee Charter as amended and set forth in Exhibits '2b-A' and '2b-A-1' of this report and to recommend its adoption to the Trustees.

BACKGROUND

The Authority's Audit Committee Charter was last amended on March 26, 2015. The changes to the Authority's Audit Committee are proposed to reflect best practices and to conform to the Canal Corporation's Audit Committee Charter, which was adopted on January 31, 2017.

FISCAL INFORMATION

None.

RECOMMENDATION

The Executive Vice President and General Counsel recommend that the Audit Committee adopt the proposed amendments to the Authority's Audit Committee Charter and recommend its adoption to the Trustees."

The following resolution was unanimously approved by the Audit Committee members.

RESOLVED, That the attached Authority Audit Committee Charter be adopted in the form proposed in Exhibit "2b-A;" and be it further

RESOLVED, That the Audit Committee recommend the adoption of the Authority's Audit Committee Charter to the Trustees.

3. DISCUSSION AGENDA:

a. Internal Audit Activity Report

Status of 2017 Audit Plan

Ms. Angela Gonzalez, Senior Vice President of Internal Audit, provided an update of the status of the 2017 Audit Plan to the Committee ("Exhibit 3a-A"). She said that of 52 projects, 48 have been completed; this represents 92% completion of the Audit Plan. The remaining audit reports should be issued by the end of the week and will complete the total deliverables for 2017.

2017 Key Accomplishments

The key accomplishments for 2017:

People

- Continued onboarding and acclimation of new team members
- Conducted business acumen, technical and soft skills trainings for the department
- Developed Internal Audit Competency Model and implemented individual development planning
- Guest Auditor Program launched with four colleagues participating in four audits
- Execution of team building activities including two group community service events
- Collaborated with Enterprise Risk Management for the LPPC Audit and Risk Roundtable Conference

Process

- Full rollout of the Audit Methodology including enhancements for consistent application
- Introduced Fraud Questionnaire to audit planning and fieldwork processes
- Continued with the Audit Liaison Program to pair Internal Audit team members with EMC-1
- Execution of over 15 informal client support activities, i.e. participation in standing committees
- Execution of nine audit transformation activities, i.e. Audit Methodology and Sharepoint Recommendation Tracking

Technology

- Successful partnership with co-source partner
- Executing on model to build out Internal Audit Technology group, hired three team members
- Co-leading project with Enterprise Risk Management and engaging other risk management units to design a risk and control framework and select the solution and implementer for the GRC tool
- Roll out of SharePoint site to track and monitor open recommendation remediation and provide management reporting
- · Piloted Data Analytics in Q4 on a key audit

Status of Audit Recommendations

Internal Audit has closed a number of issues and continues to work very closely with management to close the action plans for 2015 and 2016. The status of the open recommendations is as follows:

2015 - 11

2016 - 35

2017 - 34

b. Approval of the 2018 Internal Audit Plan

Ms. Gonzalez provided highlights of the 2018 Internal Audit Plan to the Committee. (Exhibit "3b-A") She said the Plan reflects coverage across NYPA's business units and risk areas; resources available to complete the Plan; alignment of the Top Enterprise risks and Strategic initiatives; and input from the Executive Management and other Risk Management units. Fifty (50) projects have been scheduled for 2018 and are based on Internal Audit having a full staff by July 1st and Deloitte providing subject matter expertise. In addition, the Plan was presented to the Executive Management Committee for review and comments.

Key Initiatives for 2018:

Audit Methodology

- Continue refining and improving audit methodology to drive consistency in audit execution
- Develop Agile Project Management methodology processes and apply to an audit project in Q2 2018. Goal is to increase efficiencies, client engagement and gain lessons learned. Future application to other projects to build the concept of Agile Internal Audit

Key Performance Metrics for Audit Activities

 Enhance the current reportable metrics and introduce additional metrics and goals for audit activities to drive accountability and success

Governance, Risk & Compliance (GRC) Tool Implementation

 Co-lead with Enterprise Risk Management in the creation of an enterprise risk and control framework and implement a Governance, Risk and Compliance (GRC) system

Data Analytics

Roll out developed data analytics strategy for Internal Audit for implementation in 2018

Staff Development Plans/Succession Planning

 Continue to enhance and monitor development plans for each team member to reach their development goals

Internal Audit requested that the Audit Committee approve NYPA's 2018 Internal Audit Plan.

Upon motion made by Trustee Kress and seconded by Trustee Koelmel, the 2018 internal Audit Plan was approved.

c. Approval of the 2018 Internal Audit Budget

Ms. Gonzalez provided the 2018 Internal Audit Budget to the Committee (Exhibit "3c-A"). Upon motion made by Trustee Kress and seconded by Trustee Koelmel, the 2018 Internal Audit Budget was approved.

4. Next Meeting

Chairman Nicandri said that the next regular meeting of the Audit Committee would be held on March 20, 2018 at the Clarence D. Rappleyea Building in White Plains, New York at a time to be determined.

Closing

Upon motion made by Trustee Koelmel and seconded by Trustee Kress, the meeting was adjourned by Chairman Nicandri at approximately 9:55 a.m.

Karen Delince

Karen Delince Corporate Secretary

EXHIBITS

For Audit Committee Minutes

December 12, 2017

AUDIT COMMITTEE CHARTER

A. PURPOSE

The Audit Committee ("Committee") oversees the work of the Internal Audit Department and monitors all internal audits and external audits performed by the Independent Auditor and other external agencies as well as management's corrective action and implementation plans to all audit findings.

The responsibilities of the Committee are to: recommend to the Board of Trustees the hiring of a certified independent accounting firm for the New York Power Authority ("Authority"), establish the compensation to be paid to the accounting firm and provide direct oversight of the performance of the independent audit conducted by the accounting firm hired for such purposes, provide direct oversight of the Internal Audit Department, and perform such other responsibilities as the Trustees may assign it.

B. MEMBERSHIP AND ORGANIZATION

(1) Committee Composition

The Committee will be comprised of at least three independent members of the Board of Trustees, who possess the necessary skills to understand the duties and functions of the Committee and be familiar with corporate finance and accounting. Committee members and the Committee Chair will be selected by a vote of the Board of Trustees.

Committee members are prohibited from being an employee of the Authority or an immediate family member of an employee of the Authority. In addition, Committee members shall not engage in any private business transactions with the Authority or receive compensation from any private entity that has material business relationships with the Authority, or be an immediate family member of an individual that engages in private business transactions with the Authority or receives compensation from an entity that has material business relationships with the Authority.

(2) Term

Committee members will serve for a period of five years subject to their term of office under Public Authorities Law § 1003. Committee members may be reelected to serve for additional periods of five years subject to their term of office. A Committee member may resign his or her position on the Committee while continuing to serve as a Trustee. In the event of a vacancy on the Committee due to death, resignation or otherwise, a successor will be selected to serve in the manner and for the term described above.

(3) Removal

A Committee member may be removed if he or she is removed as Trustee for cause, subject to Public Authorities Law § 2827, or is no longer eligible to serve as a Committee member.

(4) Meetings and Quorum

The quorum of the Committee is a majority of the number of regular Committee members selected by the Board of Trustees.

A majority vote of all Committee members present is required to take action on a matter.

The Committee shall hold regularly scheduled meetings at least three times per year. A Committee member may call a special meeting of the Committee individually, or upon the request of the Authority's President and Chief Executive Officer ("CEO"), Executive Vice President and Chief Operating Officer ("COO"), Executive Vice President and General Counsel ("GC"), Executive Vice President and Chief Financial Officer ("CFO"), Chief Risk Officer ("CRO"), Controller, or Chief Audit Executive of the Internal Audit Department ("CAE"). The notice of meeting need not state the purpose for which the meeting has been called. In order to transact business, a quorum must be present.

In addition, the Committee: (1) will meet at least twice a year with the CAE for the purpose of reviewing audit activities, audit findings, management's response, remediation action plans, and providing the CAE with an opportunity to discuss items and topics of relevance with the Committee; (2) will meet at least twice a year with the Authority's independent auditors to discuss the audit work plans, objectives, results and recommendations; and (3) may meet independently with the Authority's CEO, COO, GC, CFO, CRO, Controller, or CAE on matters or issues and items within the Committee's purview as it deems necessary. These meetings may be held as part of a regular or special meeting at the Committee's discretion.

An agenda will be prepared and distributed to each Committee member prior to each meeting and minutes of each meeting will be prepared in accordance with the New York Open Meetings Law. Minutes of the meeting should include, at a minimum:

- a. Date; location; time meeting was called to order and adjourned; and if other Board committee (e.g., Finance Committee) is meeting simultaneously.
- b. Title and name of attendees; public comments period; title and name of public speakers.
- c. Approval of the official proceedings of the previous month's Committee meeting.
- d. Pre-Approval of audit and non-auditing services as appropriate, all auditing services and non-audit services to be performed by independent auditors will be presented to and pre-approved by the Committee:
 - 1. External Audit Approach Plans: Independent auditor presents approach/service plan, which is to be submitted to the Committee electronically;
 - 2. Internal Audit Activity Report: CAE provides overview of Internal Audit activities; and
 - 3. Risk Management: CRO provides an overview of Risk Management activities.
- e. Follow-up items including communications to the Committee of the current status of selected open issues, concerns, or matters previously brought to the Committee's attention or requested by the Committee.
- f. Status of audit activities, as appropriate; representatives of the certified independent accounting firm or agency management will discuss with the Committee significant audit findings/issues, the status of on-going audits, and the actions taken by agency management to implement audit recommendations.
- g. Copies of handouts or materials presented to the Committee.

Any meeting of the Committee may be conducted by video conferencing. To the extent permitted by law, the Committee may hold meetings or portions of meetings in executive session.

C. FUNCTIONS AND POWERS

The Committee has the following responsibilities:

(1) General Powers

The Committee may call upon the resources of the Authority to assist the Committee in the discharge of its oversight functions. Such assistance may include the assignment of Authority staff and the retention of external advisors subject to the requirements of the Public Authorities Law and the Authority's Expenditure Authorization Procedures. The Committee may communicate directly with the CEO.

The Committee may direct any Authority employee to make oral or written reports to the Committee on issues and items within the Committee's purview.

The Committee may direct the Authority's internal auditors to conduct special audits of items and issues of concern to the Committee.

(2) <u>Accounting, Financial Reporting, and Oversight of Independent Accountants and Controller</u>

The Committee will seek to enhance the integrity, quality, reliability and accuracy of the Authority's financial statements and accompanying notes, and will oversee the relationship with the Authority's independent accountants. To accomplish these objectives, the Committee will:

- a. Provide advice to the Trustees on the selection, engagement, compensation, evaluation and discharge of the independent accountants.
- b. Review and discuss as necessary the Authority's financial statements including any material changes in accounting principles and practices with the independent accountants, the Controller, or members of Authority management.
- c. Review and approve the Authority's annual audited financial statements (including the independent accountants' associated management letter).
- d. Oversee the establishment of procedures for the effective receipt and treatment of (i) complaints regarding auditing, internal auditing and accounting matters, and (ii) the confidential submission of concerns raised by whistleblowers and other persons regarding accounting or auditing practices.
- e. Review at least annually the scope, objectives and results of the independent auditors' examination of the annual financial statements and accompanying notes, and report to the Trustees on the Committee's findings.
- f. Assure the independence of the independent accountants by approving any non-audit work by them for the Authority and examining the independent auditor's relationship with the Authority.

g. Report to the Trustees on any matters relevant to the audit process or independent accountant communications, and make such recommendations as the Committee deems appropriate.

(3) Risk Management, Internal Controls and Oversight of the Internal Audit Department

The Committee will seek to enhance the Authority's risk management infrastructure, and ensure timely and effective identification and mitigation of critical business risks. To accomplish these objectives, the Committee will:

- a. Have authority over appointment, dismissal, compensation and performance reviews of the CAE. The CAE will report directly to the Committee.
- b. Review the charter, activities, staffing and organizational structure of the Internal Audit Department with management and the CAE.
- c. Ensure that the Internal Audit Department is organizationally independent from Authority operations.
- d. Provide oversight of the Internal Audit Department and its resources and activities to facilitate the Internal Audit Department's improvement of internal controls.
- e. Review Internal Audit reports and recommendations of the CAE. This review will include a discussion of significant risks reported in the Internal Audit reports, and an assessment of the responsiveness and timeliness of management's follow-up activities pertaining to the same.
- f. Require the CAE to attend any meeting of the Committee and to prepare and deliver such reports as the Committee requests.
- g. Provide guidance to the Authority's CRO and enterprise risk management program on critical business objectives, risks and philosophy and tolerance for risk mitigation, and establish requirements for the CRO to report to the Committee.
- h. Report at least annually to the Board of Trustees on matters relating to the internal audit function and the enterprise risk management program, and make such recommendations as the Committee deems appropriate.
- i. Present periodic reporting to the Board on how the Committee has discharged its duties and met its responsibilities, and regularly report activities, issues and recommendations.
- j. Review the Committee's charter annually, reassess its adequacy, and recommend any proposed changes to the Board.
- k. Conduct an annual self-evaluation of performance, including its effectiveness and compliance with the charter.

AUDIT COMMITTEE CHARTER

A. PURPOSE

The Audit Committee ("Committee") oversees the work of the Internal Audit Department and monitors all internal audits and external audits performed by the Independent Auditor and other external agencies as well as management's corrective action and implementation plans to all audit findings

The responsibilities of the Committee are to: recommend to the Board of Trustees the hiring of a certified independent accounting firm for the New York Power Authority ("Authority"), establish the compensation to be paid to the accounting firm and provide direct oversight of the performance of the independent audit conducted by the accounting firm hired for such purposes, provide direct oversight of the Internal Audit Department, and perform such other responsibilities as the Trustees may assign it.

B. MEMBERSHIP AND ORGANIZATION

(1) Committee Composition

The Committee will be comprised of at least three, but not exceeding five, independent members of the Board of Trustees, who possess the necessary skills to understand the duties and functions of the Committee and be familiar with corporate finance and accounting. Committee members and the Committee Chair will be selected by a vote of the Board of Trustees.

The Board may vote to designate one alternate member, who meets all the Committee member requirements, to serve on the Committee (a) in the absence of a regular Committee member at a meeting, (b) upon recusal or abstention of a regular Committee member from an action, or (c) in case of a vacancy on the Committee until such time as the Board of Trustees selects a replacement Committee member.

Committee members are prohibited from being an employee of the Authority or an immediate family member of an employee of the Authority. In addition, Committee members shall not engage in any private business transactions with the Authority or receive compensation from any private entity that has material business relationships with the Authority, or be an immediate family member of an individual that engages in private business transactions with the Authority or receives compensation from an entity that has material business relationships with the Authority.

(2) Term

Committee members will serve for a period of five years subject to their term of office under Public Authorities Law § 1003. Committee members may be reelected to serve for additional periods of five years subject to their term of office. A Committee member may resign his or her position on the Committee while continuing to serve as a Trustee. In the event of a vacancy on the Committee due to death, resignation or otherwise, a successor will be selected to serve in the manner and for the term described above.

(3) Removal

A Committee member may be removed if he or she is removed as Trustee for cause, subject to Public Authorities Law § 2827, or is no longer eligible to serve as a Committee member.

(4) Meetings and Quorum

The quorum of the Committee is a majority of the number of regular Committee members selected by the Board of Trustees.

A majority vote of all Committee members present is required to take action on a matter. The alternate Committee member is counted toward a quorum and votes only as provided for under Section B (1).

The Committee shall hold regularly scheduled meetings at least three times per year. A Committee member may call a special meeting of the Committee individually, or upon the request of the Authority's President and Chief Executive Officer ("CEO"), Executive Vice President and Chief Operating Officer ("COO"), Executive Vice President and General Counsel ("GC"), Executive Vice President and Chief Financial Officer ("CFO"), Chief Risk Officer ("CRO"), Controller, or Chief Audit Executive of the Internal Audit Department ("CAE"). The notice of meeting need not state the purpose for which the meeting has been called. In order to transact business, a quorum must be present.

In addition, the Committee: (1) will meet at least <u>twice three times</u>-a year with the CAE for the purpose of reviewing audit activities, audit findings, management's response, remediation action plans, and providing the CAE with an opportunity to discuss items and topics of relevance with the Committee; (2) will meet at least twice a year with the Authority's independent auditors to discuss the audit work plans, objectives, results and recommendations; and (3) may meet independently with the Authority's CEO, COO, GC, CFO, CRO, Controller, or CAE on matters or issues and items within the Committee's purview as it deems necessary. These meetings may be held as part of a regular or special meeting at the Committee's discretion.

An agenda will be prepared and distributed to each Committee member prior to each meeting and minutes of each meeting will te-be prepared in accordance with the New York Open Meetings Law. Minutes of the meeting should include, at a minimum:

- Date; location; time meeting was called to order and adjourned; and if other Board committee (e.g., Finance Committee) is meeting simultaneously.
- b. Title and name of attendees; public comments period; title and name of public speakers.
- c. Approval of the official proceedings of the previous month's Committee meeting.
- d. Pre-Approval of audit and non-auditing services as appropriate, all auditing services and non-audit services to be performed by independent auditors will be presented to and pre-approved by the Committee:
 - External Audit Approach Plans: Independent auditor presents approach/service plan, which is to be submitted to the Committee electronically;
 - 2. Internal Audit Activity Report: CAE provides overview of Internal Audit activities; and
 - 3. Risk Management: CRO provides an overview of Risk Management activities.
- Follow-up items including communications to the Committee of the current status of selected open issues, concerns, or matters previously brought to the Committee's attention or requested by the Committee.
- f. Status of audit activities, as appropriate; representatives of the certified independent accounting firm or agency management will discuss with the Committee significant audit

findings/issues, the status of on-going audits, and the actions taken by agency management to implement audit recommendations.

g. Copies of handouts or materials presented to the Committee.

Any meeting of the Committee may be conducted by video conferencing. To the extent permitted by law, the Committee may hold meetings or portions of meetings in executive session.

C. FUNCTIONS AND POWERS

The Committee has the following responsibilities:

(1) General Powers

The Committee may call upon the resources of the Authority to assist the Committee in the discharge of its oversight functions. Such assistance may include the assignment of Authority staff and the retention of external advisors subject to the requirements of the Public Authorities Law and the Authority's Expenditure Authorization Procedures. The Committee may communicate directly with the CEO.

The Committee may direct any Authority employee to make oral or written reports to the Committee on issues and items within the Committee's purview.

The Committee may direct the Authority's internal auditors to conduct special audits of items and issues of concern to the Committee.

(2) Accounting, Financial Reporting, and Oversight of Independent Accountants and Controller

The Committee will seek to enhance the integrity, quality, reliability and accuracy of the Authority's financial statements and accompanying notes, and will oversee the relationship with the Authority's independent accountants. To accomplish these objectives, the Committee will:

- a. Provide advice to the Trustees on the selection, engagement, compensation, evaluation and discharge of the independent accountants.
- b. Review and discuss as necessary the Authority's financial statements including any material changes in accounting principles and practices with the independent accountants, the Controller, or members of Authority management.
- c. Review and approve the Authority's annual audited financial statements (including the independent accountants' associated management letter).
- d. Oversee the establishment of procedures for the effective receipt and treatment of (i) complaints regarding auditing, internal auditing and accounting matters, and (ii) the confidential submission of concerns raised by whistleblowers and other persons regarding accounting or auditing practices.
- e. Review at least annually the scope, objectives and results of the independent auditors' examination of the annual financial statements and accompanying notes, and report to the Trustees on the Committee's findings.

- f. Assure the independence of the independent accountants by approving any non-audit work by them for the Authority and examining the independent auditor's relationship with the Authority.
- g. Report to the Trustees on any matters relevant to the audit process or independent accountant communications, and make such recommendations as the Committee deems appropriate.

(3) Risk Management, Internal Controls and Oversight of the Internal Audit Department

The Committee will seek to enhance the Authority's risk management infrastructure, and ensure timely and effective identification and mitigation of critical business risks. To accomplish these objectives, the Committee will:

- a. Have authority over appointment, dismissal, compensation and performance reviews of the CAE. The CAE will report directly to the Committee.
- b. Review the charter, activities, staffing and organizational structure of the Internal Audit Department with management and the CAE.
- c. Ensure that the Internal Audit Department is organizationally independent from Authority operations.
- d. Provide oversight of the Internal Audit Department and its resources and activities to facilitate the Internal Audit Department's improvement of internal controls.
- e. Review Internal Audit reports and recommendations of the CAE. This review will include a discussion of significant risks reported in the Internal Audit reports, and an assessment of the responsiveness and timeliness of management's follow-up activities pertaining to the same.
- f. Require the CAE to attend any meeting of the Committee and to prepare and deliver such reports as the Committee requests.
- g. Provide guidance to the Authority's CRO and enterprise risk management program on critical business objectives, risks and philosophy and tolerance for risk mitigation, and establish requirements for the CRO to report to the Committee.
- h. Report at least annually to the Board of Trustees on matters relating to the internal audit function and the enterprise risk management program, and make such recommendations as the Committee deems appropriate.
- Present periodic reporting to the Board on how the Committee has discharged its duties and met its responsibilities, and regularly report activities, issues and recommendations.
- Review the Committee's charter annually, reassess its adequacy, and recommend any proposed changes to the Board.
- k. Conduct an annual self-evaluation of performance, including its effectiveness and compliance with the charter.



Audit Committee Update Internal Audit Activity Report

12/12/2017

2017 Status Update NYPA and Canals



2017 Audit Plan Status

- 2017 Plan Status:
 - 43 deliverables have been issued that are associated with 48 audit projects (including 37 reports and six interim memos) as of 11/30/17. Total 2017 deliverables will be 52 reports and memos.
 - Reporting for the remaining nine audits will be completed by 12/11/18 and are expected to be issued by the end of December.





2017 Key Accomplishments

People

- Continued onboarding and acclimation of new team members
- Conducted business acumen, technical and soft skills trainings for the department
- Developed Internal Audit Competency Model and implemented individual development planning
- Guest Auditor Program launched with four colleagues participating in four audits
- Execution of team building activities including two group community service events
- Collaborated with Enterprise Risk Management for the LPPC Audit and Risk Roundtable Conference

Process

- Full rollout of the Audit Methodology including enhancements for consistent application
- Introduced Fraud Questionnaire to audit planning and fieldwork processes
- Continued with the Audit Liaison Program to pair Internal Audit team members with EMC-1
- Execution of over 15 informal client support activities, i.e. participation in standing committees
- Execution of nine audit transformation activities, i.e. Audit Methodology and Sharepoint Recommendation Tracking

Technology

- Successful partnership with cosource partner
- Executing on model to build out Internal Audit Technology group, hired three team members
- Co-leading project with Enterprise Risk Management and engaging other risk management units to design a risk and control framework and select the solution and implementer for the GRC tool
- Roll out of SharePoint site to track and monitor open recommendation remediation and provide management reporting
- Piloted Data Analytics in Q4 on a key audit

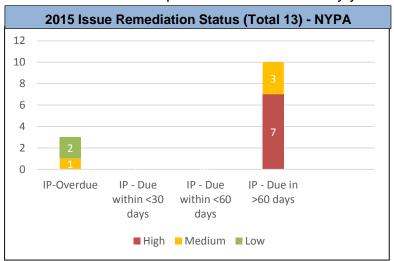


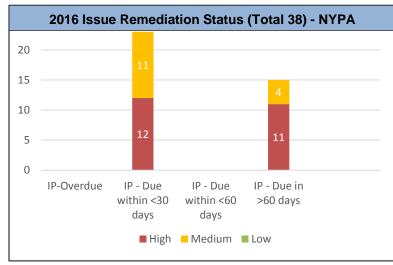
Appendix

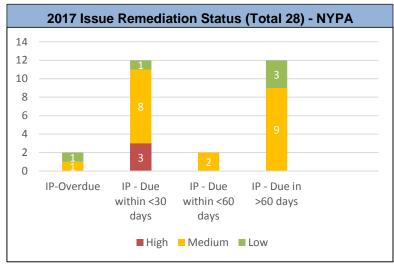


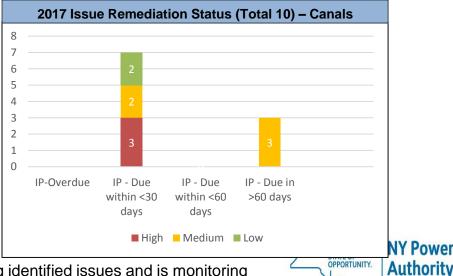
Status of Audit Recommendations – NYPA and Canals

Below is the status of open recommendations by year:





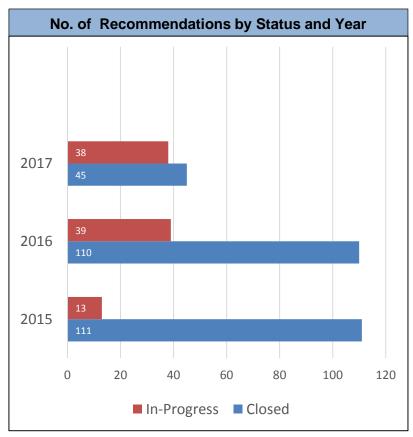


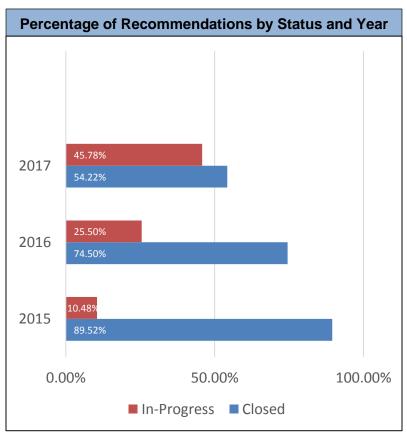


Internal Audit has supported management with reporting identified issues and is monitoring remediation efforts for High and Medium risk issues, with the priority on High Risk Issues.

Status of Audit Recommendations – NYPA and Canals

Below is a status of open recommendations by year 2015-2017:









Audit Committee Update 2018 NYPA Internal Audit Plan

12/12/2017

Executive Summary

Annual Planning Goal

Develop a 2018 Audit Plan that reflects the following:

- Adequate coverage across NYPA's business units and risk areas
- Resources necessary to successfully complete the Audit Plan
- Alignment to NYPA's Strategic Initiatives and Top Enterprise Risks
- Key stakeholder input from Executive Management and various Risk Management Units

Process Inputs



EMC Review & Audit Committee Approval

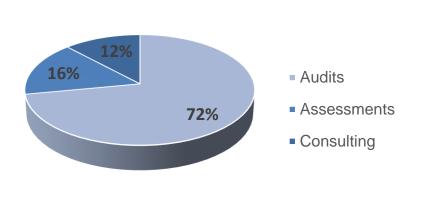


Proposed 2018 Audit Plan Coverage

2018 Planned Activities

Comparison to Prior Years

50 projects in the Proposed 2018 Audit Plan



Assessments
Audits
Consulting
Total

2018 Plan	2017 Actual	2016 Actual
8	8	10
36	21	30
6	5	4
50	34	44

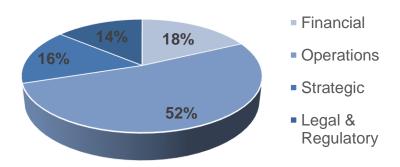
- Audits, Assessments and Consulting audit projects for 2018 are based on full staff by Q3 2018. Co-source partner will supplement staff as open positions are filled and provide subject matter expertise.
- Actual NYPA audit projects for 2017 reflect 14 audit project removals due to staff turnover and program development, process enhancements and system implementations management anticipated during 2017 which were not realized or auditable to provide value.



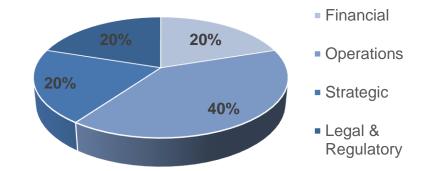
Proposed 2018 Audit Plan Risk Category Allocation

2018 Planned Allocation

Allocation by Risk Category



Goal Allocation



2018 Audit Plan

- The allocation of audit projects by risk category does not materially deviate from the 2017 actual allocation.
- Higher percentage for operational audits is due to strategic initiatives in the Utility Operations, Business Services and Technology business units and in alignment with industry best practices.
- See Appendix A for Proposed 2018 Audit Plan.
- See Appendix B for Projects Considered but Not Included in Plan.
- See Appendix C for Proposed Q1 projects.

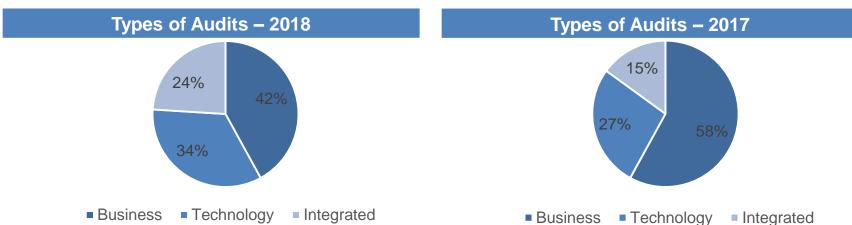


Proposed 2018 Audit Plan Resource & Risk Category Allocation

50 projects are included in the Audit Plan based on Resource Availability			
Resource Allocation	Business	Technology	
Actual Resource hours available	12,600*	4,500	
Budgeted Third Party hours available	600	3,800	
Proposed 2018 Audit Plan Hours	13,200	8,300	

^{*} Hours include full staff by July 1, 2018 equating to 4,000 available audit hours.

The above business and technology hours total 17,100, however, available business audit plan hours are 17,468 (See Appendix D – Audit Plan Internal Resource Allocation). This is due to approximately 300 hours allocated to the Canals Audit Plan to build internal expertise.



Increased integrated audits allowing IA to look at business and technology controls in coordination to provide full view of processes leading to increased efficiencies and value of audits.



Proposed 2018 Audit Plan – Alignment

88% of the projects in the Plan directly align to either a Strategic Initiative, Top Enterprise Risk, or both. See Appendix C for list of projects.

Top Enterprise Risk	# of Projects
Attract & Sustain Qualified Workforce	1
Catastrophic Events	3
Commodity Market Volatility	1
Critical Infrastructure Failure	3
Customer Energy Choices	5
Cyber Security	8
Disruptive Innovation	2
Hydro Flow Volumes	0
Regulatory/Legislative Environment	5
Sustained Low Power Prices	1
Workforce Health & Safety	0

Strategic Initiative	# of Projects
Asset Management	5
Customer Solutions	4
Knowledge Management	0
Process Excellence	4
Smart Generation & Transmission	1
Workforce Planning	1



Proposed 2018 Audit Plan – Changes for 2018

Key Changes	Discussion
Build NYPA IA Technology Capabilities	 In 2017, hired experienced Technology Manager and two Technology Team Leads to build the Technology Audit group. Two Senior Auditor – Technology positions are posted and are in recruitment. One Senior Auditor - Technology will support the Canals Audit Plan. Benefits will include: Enhanced relationship and knowledge management Improve coverage over general technology controls Increased ability to provide technology consulting Build strong technology skills within NYPA
Support Digitization Initiative	 Examples of proposed 2018 audit projects to support NYPA's digitization initiative include the iSOC, AGILe Strategic Initiative, Success Factors, Travel & Expense Review (SAP Concur), SAP LEM Planning.



Key Departmental Initiatives for 2018

Audit Methodology

- Continue refining and improving audit methodology to drive consistency in audit execution
- Develop Agile Project Management methodology processes and apply to an audit project in Q2 2018. Goal is to increase efficiencies, client engagement and gain lessons learned. Future application to other projects to build the concept of Agile Internal Audit

Key Performance Metrics for Audit Activities

 Enhance the current reportable metrics and introduce additional metrics and goals for audit activities to drive accountability and success

Governance, Risk & Compliance (GRC) Tool Implementation

 Co-lead with Enterprise Risk Management in the creation of an enterprise risk and control framework and implement a Governance, Risk and Compliance (GRC) system

Data Analytics

Roll out developed data analytics strategy for Internal Audit for implementation in 2018

Staff Development Plans/Succession Planning

• Continue to enhance and monitor development plans for each team member to reach their development goals



IA NYPA Internal Audit Plan Approval Request

IA requests that the Audit Committee approve the 2018 NYPA Internal Audit Plan.





#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Timing
1	Northern NY Power Proceeds	Audit	Commercial Operations	Non-compliance with the Northern NY Power Proceeds Act (NNYPPA) program could significantly impact designated communities and impair NYPA's reputation.	Ensure adequacy and effectiveness of controls in place to comply with the Northern NY Power Proceeds program/agreement.	Legal and Regulatory	High	Q4
2	AGILe Strategic Initiative	Consulting		unrecovered costs and potential damage to NYPA's reputation.	Determine NYPA is managing its investment in the AGILe Lab in accordance with the Board of Trustee's authorization, and progress on the proof of concept is reported. Assess the collaboration efforts amongst the various utilities to ensure successful product development.	Strategic	High	Q4
3	Maximo Asset Management Application Review	Audit		of NYPA's critical Bulk Electric System assets and maintenance not conducted at required intervals leading to potential power generation and transmission disruptions.	Verify the application controls designed for the Maximo system are functioning as intended, including interface controls and data elements have been adequately defined between these interfaces, primarily SAP. Assess whether the recent upgrades to the system are providing system effectiveness and efficiencies. Follow up on audit observations from the 2015 Asset Management -Maximo audit and determine if remediations have been adequately implemented.	Operations	High	Q3
4	Capital Asset Management	Audit		inaccurately recorded on the financial statements leading to financial misstatements.	Review the adequacy and efficiency of current Capital Asset Management policies and procedures as they relate to asset procurement, valuation, tracking and monitoring, recording and reporting, disposal of assets, and depreciation.	Financial	High	Q1
5	Indirect Expenses - Cost Allocations	Assessment	Entity-Wide	uninformed business decisions.	Assess NYPA's indirect overhead methodology to validate its appropriateness. Evaluate the adequacy and effectiveness of controls for allocating indirect costs (including corporate overhead) in NYPA's new, financially driven decision-making culture. Assess change management efforts by NYPA as well as the tools available to both allocate costs and monitor cost allocation activities. Where applicable, evaluate support for judgments for reasonableness, consistency and accuracy.	Strategic	High	Q3
6	Customer Contract Design Review Support	Assessment		Inadequate control provisions in contracts could lead to the inability for NYPA to hold customers accountable to contract terms.	Provide support to the Marketing and Legal Departments as customer contracts are renegotiated and contracts terms developed to ensure adequacy of contract controls.	Legal and Regulatory	High	Q2



#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Timing
7	Customer Energy Solutions Redesign Support	Consulting	Commercial Operations & Energy Solutions	Inadequate risk assessment and control design of revised Customer Energy Solutions Strategic initiative could lead to inefficiencies and unmitigated operational and financial risks.	Provide support to NYPA as the Customer Energy Solutions Strategic nititative business plan is revised and implementation efforts are initiated to ensure controls established are adequate to mitigate NYPA's operational and financial risks. Scope of work to include the following: - Workflow design support (process flowcharts and risk/control worksheets) – CRM workflow - QA/QC Program implementation support – collaborate with QA/QC personnel on risk, control and root cause discovery and implementation of control monitoring on a pilot basis (Harbor Lights) - Harbor Lights project support – review of project documentation supporting key decisions for enhancement opportunities	Strategic	High	Ongoing
8	Cyber Security Roadmap Consulting Support	Consulting	Technology	Failure to properly implement the work streams of the Cyber Security roadmap will not elevate NYPA's security posture and lead to potential cyber security events.	Review the progress of the Cyber Security roadmap rollout and related work streams, including those carried over from 2017, in accordance with their timeline. Determine if the rollout for each work stream is meeting its objectives, milestones and proper controls have been incorporated and documented.	Operations	High	Ongoing
9	Operations Technology Disaster Recovery (DR)	Assessment	Utility Operations	systems can lead to unrecoverable electric power generation and	Review the processes and procedures for disaster recovery for OT systems from a utility operations perspective. Determine disaster recovery procedures are documented, tests regularly scheduled and documented, results reported to senior management and procedures updated based on test results. Consider the implementation of the DLAN system and assess the adequacy of alternate location (New Hartford).	Operations	High	Q4
10	Treasury Operations	Audit	Business Services	nadequate controls over Treasury Operations and related processes could result in fraud, mismanagement, waste or errors, and unauthorized trades.	Evaluate the effectiveness of processes, procedures, and internal controls associated with Treasury operations including, but not limited to, cash and iquidity management, debt and financial risk management, and other cash management decisions. Consider high risk activities like, investment, loan origination, bad debt management and manual check processing.	Financial	High	Q3
11	IT Disaster Recovery (DR)	Audit	Technology	Ineffective disaster recovery procedures for IT systems can lead to unrecoverable business functions and systems in the event of a disaster not enabling support to NYPA's operations.	Review the processes and procedures for disaster recovery for IT systems from an enterprise-wide perspective. Determine disaster recovery procedures are documented, tests regularly scheduled and documented, results reported to senior management and procedures updated based on test results.	Operations	High	Q2
12	Mobile Device Security	Audit		neffective controls for mobile devices can lead to unauthorized access to NYPA data stored on mobile devices, download of inappropriate applications, outdated software versions, and device unavailability due to compromise.	Review the processes, procedures and system tools to manage mobile devices. Evaluate security controls for the physical devices, data housed/transitted by these devices and monitoring processes and technologies. Security would include access controls and authentication, virus and malware prevention, secure connection and transmission, data encryption and device decommissioning.	Operations	High	Q2



#	ŧ	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Timing
13	3	Network Administration	Audit		controls can result with poor network design, network instability, unauthorized access, and unavailability which can significantly impact NYPA's operations.	Assess the effectiveness of controls for perimeter security relative to firewalls, VPN, and routers. Areas of review include network design (WAN/LAN), redundancy, penetration testing, security over network devices, version currency, system management, monitoring and logging, system integrity, compliance with technical NYPA policies and standards, network performance, and segregation of duties. Audit coverage would be for IT and OT.	Operations	High	Q3
14	4 N	lew York Energy Manager - Business Processes	Consulting		negative impact to NYPÁ's profitability and reputation.	Evaluate the adequacy and effectiveness of controls designed to manage New York Energy Manager's service offerings. Confirm that strategic investments are in line with the Board of Trustee's authorization and transparency on both investments and ongoing performance to the Board. Evaluate financial performance and ensure procedures are aligned to financial performance targets including desired profitability targets.	Strategic	High	Ongoing
15	5	Niagara SCADA Upgrade	Audit		unauthorized access to the system.		Operations	High	Ongoing
16	6	Remote Access	Audit		lead to unauthorized system access and potential system compromise.	Review the controls and tools used for employees and contractors/consultants to obtain access to NYPA systems remotely either through VPN or Citrix. Verify VPN and Citrix servers have been properly configured with effective security protocols. Determine if there are systems within NYPA that allows remote functionality to access applications (remote desktop software) or terminal emulation (interface to remote systems). OT would be covered under the NERC CIP compliance program.	Operations	High	Q4
17	7	SAP Basis Administration	Audit		unauthorized access, system compromise and inefficient system performance.	Evaluate security administration controls in place for SAP by reviewing system configuration using Basis. Basis includes client/server architecture and configuration, a relational database management system (RDBMS), and a graphical user interface (GUI). In addition to the interface between system elements, Basis components include a development environment for R/3 applications, and a data dictionary, as well as user and system administration and monitoring tools.	Operations	High	Q1



#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Timing
18	Cyber Security Policy Compliance	Audit	Entity-Wide	Failure to comply with existing Cyber Security policies and procedures could impact NYPA's security posture and lead to potential cyber security events. In addition, improper Cyber Security governance can lead to non-compliance with regulations, and decrease the success of the Cyber Security roadmap rollout.	the effectiveness of the Cyber Security function to provide the proper governance for the Cyber Security program.	Operations	High	Q3
19	Expense Authorization Procedure (EAP)	Audit	Business Services	Expenditures are processed without the appropriate approval levels resulting in non-compliance with NYPA's Expenditure Authorization policy. This can lead to unauthorized, fraudulent and/or duplicate payments and financial losses to NYPA.	Review the adequacy and efficiency of the current EAP. Evaluate the effectiveness of the internal controls in place to ensure compliance with established policy.	Financial	High	Q3
20	Success Factors Post Implementation	Audit		Lack of effective system implementation can lead to original business objectives not meet, poor system performance, inefficiencies and user dissatisfaction.	Determine the key modules within Success Factors (Goals, Performance, Compensation, Onboarding, Recruiting) are functioning as intended, if business objectives have been met, efficiencies gained, metrics for success are tracked, system performance is adequate, organizational change management is effective and users are satisfied. Also, verify if additional changes or manual work arounds were necessary after go live.	Operations	High	Q3
21	Third Party Contract Audits	Audit		Third party vendor non-performance could lead to delays or failure to achieve business objectives, impairment of NYPA's reputation or increased litigation.	Identify high risk third party contracts (vendor, service provider, contractors or consultants) and exercise Internal Audit's audit rights to confirm performance in accordance with contract terms including accuracy of invoicing and contract deliverables.	Operations	High	Ongoing
22	Threat and Vulnerability Management	Audit		Ineffective cyber threat and vulnerability management processes and tools can lead to systems compromise, degradation, and unavailability.	Review the processes and security tools in place to detect and address cyber threats to NYPA systems as well as managing vulnerabilities within these systems including wulnerability monitoring and analysis, patch management and malware protection. OT would be covered under the NERC CIP compliance program.	Operations	High	Q1
23	Virtualized Computing	Audit		inadequate security, change management, and monitoring controls for the virtualized computing environment can result with unauthorized access, system instability and unavailability.	Assess the controls for management of NYPA's virtualized computing environment (e.g. servers) including an evaluation of the processes and standards used by IT to administer these environments. The review should address configuration settings, access, administration, process consistency, monitoring, change control, and continuity of operations.	Operations	High	Q2



#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Timing
24	Systems Development Lifecycle (SDLC) Governance	Assessment		inadequate governance policies and procedures for SDLC processes for systems/applications can lead to cost overruns, systems/applications developed or vendor solutions that do not meet user requirements, delays in promoting systems/applications to production, poor system performance and ineffective production support.	Evaluate the various systems development governance processes for both in-house developed systems and vendor solutions. Assess the requirements for each phase of the SDLC and ensure policies and procedures align with the Gate process for IT solution implementation. Determine if the proper checkpoints and signoffs have been incorporated to ensure consistency and accountability. Verify if metrics have been developed and are monitored to ensure successful system implementation.	Operations	High	Q4
25	Strategic Supply Management (SSM) Operating Model Assessment	Assessment	Business Services	neffective implementation of the new SSM Operating Model to transform Procurement can lead to continued inefficiencies, cost-savings not realized for procurement processing, and management not benefitting from the investment made to transform this function.	Evaluate the implementation status of the SSM Operating Model to determine if planned objectives were met, and SSM has realized the anticipated benefits of the transformation.	Strategic	High	Q2
26	SENY Meter To Cash	Audit	Business Services	inaccurate or incomplete scheduling and/or settlement between the NYISO market participants, and SENY customers could lead to financial losses and/or incorrect customer bills.	Confirm from the delivery of energy to SENY's customer (at the meter), to the receipt of cash to satisfy accounts receivable, that NYPA is accurately allocating energy and other costs and billing/collecting those costs to/from its customers. Consideration will be given to both physical and financial transactions to the extent they exist. Processes and related handoffs between the following groups are in scope: Metering, Scheduling/Forecasting, Settlements, Energy Charge Adjustments and other rate related adjustments, Billing, Accounts Receivable/Collections, etc.	Operations	High	Q3
27	Work Breakdown Structure (WBS) Code Governance	Audit	Entity-Wide	Lack of proper controls could result in inaccurate cost allocation and project management.	Evaluate the controls governing WBS codes including, but not limited to, the creation, management and allocation of costs to WBS codes. Determine if there are automated controls in place to control proper use of these codes.	Financial	High	Q1
28	Enterprise Portfolio Management Design Assessment	Assessment	Entity-Wide	Lack of alignment of various functional areas working to establish Portfolio Management solutions can lead to inefficiencies and excessive costs to NYPA.	Evaluate portfolio management functions and tools in existence or development across NYPA to improve prioritization and management of the broad range of nonrecurring projects to confirm common vision, framework and alignment of outcomes. Ensure the common framework incorporates consistent prioritization metrics including, but not limited to, risk, operational and/or financial impacts. Functional areas to be considered in this assessment include, but are not limited to, Enterprise Portfolio Management, IT Project Management, and Operations Portfolio Management.	Operations	High	Q2
29	Bid to Bill System Implementation	Audit		Lack of effective system implementation, project management and business process controls can result with inadequate system design, project delays, cost overruns, poor system performance and user dissatisfaction.	Review implementation activities to ensure the Bid to Bill System has proper business requirements including controls, system configuration, interfaces, systems and user acceptance testing, system security and overall project management.	Operations	High	Ongoing
30	SAP LEM Planning	Consulting	Entity-Wide	Ineffective planning to enhance the performance and controls for SAP can lead to inadequate system design, project delays, cost overruns, poor system performance and not meeting the objectives of the SAP modernization.	Determine the objectives of the SAP modernization efforts. Assess whether the modernization efforts include the proper controls and will enhance performance and data analytics capabilities for increased effectiveness, efficiencies and decision making from the various SAP modules.	Strategic	High	Ongoing



#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Timing
31	Non-Purchase Order (Non-PO) Process	Audit	Business Services	Non-PO transactions may not be processed appropriately giving rise to control weaknesses and possibility of fraud.	Evaluate the policies, procedures and controls for Non-PO purchases. Review Non-PO purchases to ensure compliance with policy, and appropriateness of transactions, including Canals.	Financial	High	Q3
32	Integrated Smart Operations Center (ISOC)	Consulting	Entity-Wide	ineffective operations from the iSOC can lead to inefficient or unauthorized use of NYPA assets, undetected potential equipment failures, cyber and physical security events impacting NYPA's delivery of power to the changing market conditions and demands.	Provide support to NYPA as the ISOC is developed and implementation efforts are underway to ensure controls established are adequate to mitigate NYPA's operational, cyber security and financial risks. Areas for review include, but are not limited to, evaluation of operations as they are implemented to determine they are designed in accordance with its business objectives and requirements and review of related policies and procedures for proper controls.	Strategic	High	Ongoing
33	Energy Commodity Risk Management System Implementation	Audit	Risk Management	Lack of effective system implementation, project management and business process controls can result with inadequate system design, project delays, cost overruns, poor system performance and user dissatisfaction.	Review implementation activities to ensure the Energy Commodity Risk Management System (Allegro/Ascend) has proper business requirements including controls, system configuration, interfaces, systems and user acceptance testing, system security and overall project management.	Strategic	High	Ongoing
34	Customer Revenue - Hydro Billing	Audit	Business Services	inadequate controls and processes over billing, accounting and reporting of customer revenues from wholesale can result in financial loss and reputational risk to NYPA.	Evaluate the adequacy and effectiveness of the controls in place to ensure customer revenues from hydro supply are properly billed, received and recorded. Verify compliance with policies and procedures.	Financial	High	Q1
35	Vegetation Management	Audit	Utility Operations	Lack of oversight of vegetation management contractor could lead to excessive costs or poor contract performance.	Ensure adequacy and effectiveness of vendor management controls to ensure quality of vendor performance and management of costs.	Operations	Medium	Q1
36	Ariba Post Implementation	Audit	Business Services	Lack of effective system implementation can lead to original business objectives not meet, poor system performance, inefficiencies and user dissatisfaction.	Determine for the modules Supplier Information & Performance Management (SIPM), Sourcing and Contract Lifecycle Management within Ariba are functioning as intended, if business objectives have been met, efficiencies gained, metrics for success are tracked, system performance is adequate, organizational change management is effective and users are satisfied. Also, verify if additional changes or manual work arounds were necessary after go live.	Operations	Medium	Q2
37	Community Settlements	Audit	Law	Misrepresentation or falsified documents by Community programs may lead to inappropriate or fraudulent payments.	Evaluate the adequacy and effectiveness of controls in place to ensure financial payments and other negotiated settlements are met by NYPA in accordance with funding agreement terms. Confirm the accuracy and completeness of financial payments, and appropriateness and reliability of documentation provided by the Community programs.	Legal and Regulatory	Medium	Q4



#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Timing
38	Cost of Service and Rate Model Design Support - SENY	Assessment	Business Services	inaccurate customer rates and cost of service could lead to financial losses.	Assess new cost of service rate model for the seven SENY customers to ensure individual customer rates are appropriately applied and the cost of service is recovered.	Operations	Medium	Q2
39	Recharge NY Customer Compliance Audit (D&M)	Audit		Noncompliance with Recharge NY and other power allocation program (EP, RP,etc.) legislation could lead to increased regulatory scrutiny and negatively impact NYPA's reputation.	Recurring customer audits for the NYPA Marketing Department to support compliance program.	Legal and Regulatory	Medium	Ongoing
40	Western NY Customer Compliance Audit (D&M)	Audit		Noncompliance with Western NY and other power allocation program (EP, RP,etc.) legislation could lead to increased regulatory scrutiny and negatively impact NYPA's reputation.	Recurring customer audits for the NYPA Marketing Department to support compliance program.	Legal and Regulatory	Medium	Ongoing
41	Customer Data Protection	Audit	Entity-Wide	Lack of proper controls in place to ensure sensitive customer data such as name, tax id#, bank account, etc. has not been disclosed can lead to reputational damage to NYPA and potential loss of customers.	Evaluate the controls governing customer data to ensure it is protected from compromise in accordance with NYPA's policies and procedures and industry standards.	Legal and Regulatory	Medium	Q3
42	Primavera Post Implementation	Audit		Lack of effective system implementation can lead to original business objectives not meet, poor system performance, inefficiencies and user dissatisfaction.	Determine if the Primavera application is functioning as intended, if business objectives have been met, efficiencies gained, metrics for success are tracked, system performance is adequate, organizational change management is effective and users are satisfied. Also, verify if additional changes or manual work arounds were necessary after go live.	Operations	Medium	Q2
43	Wheeling Expense	Audit		Ineffective settlement could lead to NYPA paying inaccurate wheeling costs or passing these costs on to customers.	Evaluate the adequacy and effectiveness of controls to ensure the accuracy of wheeling charges (charges for transportation of electric energy (megawatt-hours) from within an electrical grid to an electrical load outside the grid boundaries) and the proper allocation of costs to customers.	Financial	Medium	Q4
44	Data Center Operations	Audit		Inadequate controls over the activities at the NYPA data center could put confidential NYPA data at risk, risk damage 8 theft of valuable IT equipment, result in NYPAs inability to recover systems in the event of a service interruption, and damage NYPAs reputation.	Determine the effectiveness of policies and procedures in place for NYPA's data centers governing physical security and environmental controls, data backup and recovery, change management, logical access, and job scheduling. Verify the primary data center can fail over to the secondary and the proximity of the data centers. Assess whether proper coverage is maintained at NYPA's data centers and employees are adequately trained.	Operations	Medium	Q4



#	Proposed Project	Project Type	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Timing
45	Payroll Audit Follow-up	Audit	Ineffective or inefficient payroll processing activities could result in incorrect, improper or unauthorized payments to employees.	Evaluate the adequacy of remediation for recommendations from the 2016-04 Payroll audit to ensure risks have been properly mitigated.	Financial	Medium	Q2
46	Travel & Expenses Review	Audit	Inadequate travel & entertainment expense policies can lead to inappropriate and unauthorized charges for travel and entertainment when conducting NYPA business potentially damaging NYPA's reputation.	Review travel and entertainment expenses to determine these expenses are processed in accordance with NYPA policies. Verify the new SAP Concur system has been configured properly to process these expenses and charges not in compliance are rejected, corrected and processed timely. Determine if exceptions are reported to management.	Financial	Medium	Q2
47	Social Media	Audit	Lack of proper policies and procedures for the use of social media and monitoring of content posted can result with inappropriate and inaccurate comments by employees not representing organizational beliefs and truths leading to reputational damage.	Evaluate the controls for governance, policies, procedures, monitoring, training and awareness functions and processes related to social media. NYPA has its own presence on Facebook, Twitter and other social media sites and employees can post comments. Information posted on NYPA's social media accounts will be evaluated to ensure appropriate content is posted and avoidance of excessive use by users. Determine monitoring and damage control processes are in place and operational.	Operations	Medium	Q2
48	Fleet Management Operations	Audit	reputation.	Evaluate the adequacy of Fleet Operations policies, procedures, and systems including acquisition, maintenance, disposal of fleet vehicles and equipment. Assess the management and use of the fleet fuel cards and other expenses. Verify the processes and tools in place for driver license monitoring at WPO and the various sites. Follow up on remediation from OSC audit.	Operations	Medium	Q2
49	Dodd Frank Compliance	Audit	Failure to comply with the Dodd Frank Act could lead to monetary penalties and impact NYPA's reputation.	Determine NYPA's derivatives portfolio. Evaluate policies and procedures designed to ensure compliance with the Dodd Frank Act.	Legal and Regulatory	Medium	Q2
50	Facilities Management	Assessment	Lack of alignment of services could lead to inefficiencies, impact NYPA's relationship with landowners and stakeholders, and cost effectiveness.	Assess the operations of the Real Estate group's services to ensure they align with their strategic objectives, and support NYPA's operations. This will be accomplished through an end-to-end process review.	Operations	Medium	Q4





	Proposed Project	Description/Preliminary Scope	Action
1	Western NY Pow er Proceeds	Ensure adequacy and effectiveness of controls in place to comply with the Western NY Power Proceeds program/agreement.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
2	Budgeting and Forecasting Follow -up	Follow -up to 2015 Budgeting and Forecasting audit to confirm adequacy and effectiveness of mitigation efforts.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
3	Business Development Governance	Evaluate the various business development related functions of NYPA (marketing, energy efficiency, Smart G&T, project development, finance, and others being contemplated) to confirm common vision, clarity of roles and responsibilities, business development framework and coordination of activities.	Medium risk activity. Audit coverage during the 2015 Strategic Plan Governance and Execution and 2016 Strategic Plan Governance follow up.
4	Cloud Governance Follow-up	Review the remediation efforts for the recommendations made from the Cloud Governance assessment in 2016 to determine the adequacy of implemented management action plans and controls.	Management is actively w orking on remediating 2016 observations throughout 2018. IA is monitoring progress will include in the 2019 audit plan.
5	User Access Management	Review the design of IT & OT periodic user access recertification process/ controls at netw ork, application, database, and operating system focusing on high privileged accounts (HPA).	Medium risk activity. Consider in 2018 if risk or Audit resoure levels change.
6	Data Governance & Protection Program	Evaluate the data governance and protection program policies, processes and procedures to ensure the design of controls are appropriate, have been incorporated and documented.	Assess Data Governance & Protection as part of the Cyber Security Roadmap Support in 2018. Consider for inclusion in the 2019 audit plan.
7	Data Loss Prevention (DLP)	Evaluate the DLP policies, processes, procedures and system tools to ensure the design of controls are appropriate to prevent data loss at the network, web, email and endpoint levels, have been incorporated and documented.	Assess Data Loss Prevention component as part of the Cyber Security Roadmap Support project included in the 2018 audit plan. Consider for inclusion in the 2019 audit plan.
8	Database Security	Assess the effectiveness of controls for Oracle and SQL database security. Areas of review will include logical access, system administration, process governance, responsibilities, operating procedures, continuity of operations, and monitoring. Audit coverage will include IT and OT.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
9	Email Security	Determine the controls in place are effective for e-mail security, transmission and retention. Email is a key corporate tool to enhance productivity and communicate internally and externally. Proper security controls to ensure email transmissions are encrypted, emails with suspicious content are filtered, storage is efficient and retention controls need to be in place. This includes evaluating the processes and standards used by the IT Department to administer the e-mail environments including administration, proper configuration settings, consistency of processes, monitoring, and continuity of operations.	Assess Email Security as part of the Cyber Security Roadmap Support project included in the 2018 audit plan. Consider for inclusion in the 2019 audit plan.



	Proposed Project	Description/Preliminary Scope	Action
10	Event Management Process Assessment	Evaluate processes that exist at NYPA for planning and executing public events to ensure clarity of roles and responsibilities as well as consistency of communications.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
11	Financial Data Protection	Evaluate the controls governing financial data to ensure this data is protected from compromise in accordance with NYPA's policies and procedures and industry standards.	Financial data does not pose as high a risk for identity theft as customer data. Consider for inclusion in the 2019 audit plan.
12	Financial Operations Improvement Process Support	Provide support to the Business Services business unit as they complete their assessment of improvement opportunities across the business unit and implement process and control improvements.	Business Services processes to be reviewed independently including Treasury, Strategic Supply Management and Enterprise Portfolio Management. Additional areas to be considered in future audits.
13	Financial Performance Metrics	Verify the completeness and accuracy of information supporting the new Economic Value Add (EVA) performance metric as well as the Profit and Loss statements for NYPA's profit centers. Ensure calculations of metrics are accurate and consistent.	Coverage will be included as part of the Enterprise Portfolio Management assessment.
14	Identity Access Management	Assess the effectiveness of processes and procedures in place to ensure all users (internal, external and temporary) are given appropriate access to NYPA's network and applications in accordance with job roles and responsibilities, are authorized and proper authentication methods implemented. Evaluate process for proper user provisioning which includes requesting, establishing, issuing, suspending, modifying and closing user accounts and related user privileges. Determine adequate user access monitoring has been established which includes entitlement reviews and activity log evaluation.	Assess IAM components within the Cyber Security Roadmap in 2018. Prior audit coverage under the User Access Recertification & User De-Provisioning 2016-11.



	Proposed Project	Description/Preliminary Scope	Action
15	ISO 55000 Compliance	Provide support to Operations as they develop a framew ork and process for compliance with ISO55000 by 2018. Specifically support the following roadmap sections: - Section 36 - Asset Management System Monitoring - support development of a governance process to monitor the effectiveness of the Asset Management System; and - Section 37 - Management, Review, Audit & Assurance - support the development of	Management has contracted with an external assessor to ensure ISO 55000 certification. The business with not be using IA for this purpose until 2019.
16	IT Asset Management	Review the effectiveness of processes and procedures established to control IT hardware/mobile assets throughout the lifecycle of ordering, receiving, storage, deployment, record keeping, and disposition. The focus will be IT physical hardware/mobile assets such as servers, routers, switches, hardware firewalls, laptops, desktops, monitors, desktop phones, smartphones and tablets. Physical inventory will be performed.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
17	IT KPI and Metric Development	Evaluate the types of KPIs and metrics IT can be measured on to demonstrate effectiveness and efficiency that are meaningful and can be actionable to improve IT operations. Review potential benchmarking for IT to consider.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
18	Capital Lease Accounting Assessment	Evaluate management's assessment of NYPA's portfolio of leases including any key metrics such as leverage ratios, used to determine lease classification affected by the new accounting standards. Assess management's compliance GASB # 87 issued in June 2017. In addition, assess mitigation for potential impact on banking covenants and other debt instruments resulting from any revised metrics.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
19	Manual Check Processing	Ensure the adequate and effective handling of checks received by NYPA.	Assess Manual Check processing as part of the Treasury Audit in the 2018 audit plan.
20	Marketing Control Self Assessment Design Review Support	Provide support to the Marketing Department as they expand on existing control self assessment activities to ensure a common framework exists and consistency of implementation.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.



	Proposed Project	Description/Preliminary Scope	Action
21	North Country Economic Development Plan Compliance	Ensure NYPA is complying with all agreed upon terms of the economic development plan.	Audit coverage under the Western NY Pow er Proceeds audit in 2016.
22	Office 365	Evaluate the proper security controls were implemented for the Office 365 cloud solution where NYPA files will be stored and may be accessed by any device.	Medium risk activity. Office 365 has not been rolled out to the organization and is still in development. Consider for 2019 audit plan as rollout progresses in 2018.
23	Operating Forecast Process	Evaluate operating forecast inputs, processes and outputs to ensure repeatable and reliable forecasts. Ensure forecasting best practice are being applied and that controls to validate input accuracy exist.	Medium risk activity. Consider in 2018 if risk or audit resource levels change.
24	Resource Loaded Scheduling	Verify the accuracy and completeness of resource loaded schedules in development within Operations to support the results as a credible source for future resource allocation decisions.	Audit coverage under the Primavera post implementation audit included in the 2018 audit plan.
25	SAP Business Warehouse	Evaluate data management, security, and governance for the SAP Business Warehouse and other SAP BW/BI components including Business Objects. Given the reliance by the business to make sound business decisions based on the data warehouse's data, proper controls for inputs received, outputs transmitted and data warehouse design and functionality need to be in place to ensure effectiveness and efficiency of the data provided.	Medium risk activity. Consider in 2018 if risk or audit resource levels change.
26	SAP CHARM System Implementation	Review pre/post implementation activities to ensure SAP CHARM, used for change control has proper business requirements, system configuration, interfaces, systems and user acceptance testing, system security and overall project management.	Medium risk activity. Consider in 2018 if risk or audit resource levels change.



	Proposed Project	Description/Preliminary Scope	Action
27	SDLC Improvement Support	Assist management with the development of the SDLC roadmap to address the recommendations made in the SDLC assessment in 2016.	Audit coverage under the SDLC Governance assessment included in the 2018 audit plan.
28	Softw are License Management	Review software license management processes including compliance with license requirements. Areas of review included are policies and procedures; inventories and license compliance, utilization, cost management, procurement strategy and distribution, retirement and reuse of software.	Medium risk activity. External vendor review performed of core system license usage in 2017. Consider for inclusion in the 2019 audit plan.
29	System Testing Management	Review testing procedures for selected IT Projects to determine if testing strategies are developed, testing is documented, defects are re-tested for unit, regression, integration and user acceptance testing prior to migration to production. Audit coverage is for IT only.	QA function not developed with IT; not auditable at this time. Will consider for future audits.
30	Unstructured Data Review	Assess the processes and procedures in place over unstructured data, focusing on security. Unstructured data comprises of data w ithin company share drives, SharePoint sites, and instant messages etc. w hich can contain confidential data. NYPA has numerous share drive files (e.g. Word, Pow erPoint), SharePoint sites, instant messages w ithin each of its business units and proper security administration needs to be in place to prevent unauthorized access to confidential data.	Medium risk activity. Consider in 2018 if risk or audit resource levels change.
31	Whistleblow er and Anti-Retaliation	, , , , , , , , , , , , , , , , , , ,	Medium risk activity. Consider in 2018 if risk or audit resource levels change.
32	Project Management Methodology Assessment	Enterprise-wide assessment of project management framew orks/methodologies to ensure standardization, consistency and proper project management controls have been incorporated, documented and communicated to stakeholders. This assessment will build upon the 2015 Energy Efficiency Construction Audit and 2016 Operations Project Management Assessment to look across the organization at project management controls. Functions to be considered in scope include but are not limited to Operations Project Management, Energy Efficiency, and Information Technology.	Audit coverage as part of Enterprise Portfolio Management assessment included in the 2018 audit plan.



	Proposed Project	Description/Preliminary Scope	Action
33	Records Retention Management	Follow-up to 2015 Records Management Audit findings to confirm adequacy and effectiveness of mitigation efforts.	Medium risk activity. Consider in 2018 if risk or audit resource levels change.
34	SAP Concur System Implementation		Audit coverage as part of the Travel & Expenses audit included in the 2018 audit plan.
35	Energy Management Systems (EMS)	Review implementation activities to ensure the Energy Management System has proper business requirements including controls, system configuration, interfaces, systems and user acceptance testing, system security and overall project management.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
36	Intellectual Property	Assess the controls over the development, storage, and copyright of NYPA intellectual property assets to ensure proper protection has been implemented to prevent theft.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
37	Workers Compensation	Assess the controls over workers compensation. Ensure that claims were reasonable, supported, and in compliance with State and local law, policies and procedures, and other agreements.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
38	Employee Compensation	Evaluate policies and procedures to determine how employee compensation is determined, whether it is benchmarked, and maintains NYPA as a competitive employer.	Medium risk activity. Consider in 2018 if risk or audit resource levels change.



	Proposed Project	Description/Preliminary Scope	Action
39	Medical & Dental Benefits Administration	Determine w hether NYPA has adequate controls over medical and dental benefits administration to ensure health premiums are calculated and paid accurately for eligible active employees, in accordance w ith policies and procedures, and in compliance w ith agreements.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
40	Know ledge Transfer Program	Evaluate policies and procedures for know ledge transfer program. Determine criteria for employees that require know ledge transfer and adequacy of documentation including Know ledge Transfer Task to Do list.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.
41	FLMA Rollout	Assess policies and procedures to ensure alignment with the New York State Paid Leave Program. Identify areas for potential misuse/abuse and determine the controls in place to mitigate this risk.	Medium risk activity. Consider in 2018 if risk or Audit resource levels change.



Appendix C – Supporting Information



Appendix C – Proposed Q1 Projects

Q1 projects were selected to align to either management requests or to minimize impact to NYPA functions working on strategic initiatives:

Area	Project		
Operations	 Vegetation Management SAP Basis Administration Threat and Vulnerability Management 		
Strategic	 New York Energy Manager – Business Processes (Ongoing – to start in Q1) SAP LEM Planning (Ongoing – to start in Q1) Integrated Smart Operations Center (iSOC) – (Ongoing – to start in Q1) Energy Commodity Risk Management System Implementation (Ongoing – to start in Q1) 		
Financial	 Capital Asset Management Work Breakdown Structure (WBS) Code Governance Customer Revenue – Hydro Billing 		
Legal and Regulatory	 Recharge NY Customer Compliance Audit (D&M) Western NY Customer Compliance Audit (D&M) 		



Appendix C – Plan Alignment to Strategic Initiatives

Strategic Initiative	Projects
Asset Management	 Maximo Asset Management Capital Asset Management Fleet Management Operations Integrated Smart Operations Center (iSOC) Facilities Management
Customer Solutions	 Customer Energy Solutions Redesign Support New York Energy Manager – Business Processes Primavera Post Implementation Bill to Bill System Implementation
Knowledge Management	• None
Process Excellence	 Ariba Post Implementation Strategic Supply Management (SSM) Operating Model Assessment Enterprise Portfolio Management Design Assessment SAP LEM Planning
Smart Generation & Transmission	AGILe Strategic Initiative
Workforce Planning	Success Factors Post Implementation



Appendix C - Plan Alignment to Top Enterprise Risks

Top Enterprise Risk	Projects
Attract and Sustain Qualified Workforce	Success Factors Post Implementation
Catastrophic Events	IT Disaster Recovery (DR)Data Center OperationsSocial Media
Commodity Market Volatility	Energy Commodity Risk Management System Implementation
Critical Infrastructure Failure	 Maximo Asset Management Application Review Operations Technology Disaster Recovery (DR) Niagara SCADA Upgrade
Customer Energy Choices	 Recharge NY Customer Compliance Audit (D&M) Western NY Customer Compliance Audit (D&M) Customer Energy Solutions Redesign Support New York Energy Manager – Business Processes Primavera Post Implementation
Cyber Security	 Cyber Security Roadmap Consulting Support Mobile Device Security Network Administration Remote Access SAP Business Administration Cyber Security Policy Compliance Threat and Vulnerability Management Virtualized Computing

Appendix C - Plan Alignment to Top Enterprise Risks

Top Enterprise Risk	Projects
Disruptive Innovation	 AGILe Strategic Initiative Integrated Smart Operations Center (iSOC)
Hydro Flow Volumes	• None
Regulatory/Legislative Environment	 Northern NY Power Proceeds Vegetation Management Community Settlements Customer Data Protection Dodd Frank Compliance
Sustained Low Power Prices	Wheeling Expense
Workforce Health & Safety	• None



Appendix D – Audit Plan Internal Resource Allocation

	# of Days	# of Hours
Total Available Time	4,665	34,987
Non-Audit Time - Training/Professional Development - Vacation/Sick/Holidays - Administrative (includes vacancy factor) Total – Non-Productive Time	(368) (785) (679) (1,832)	(2,760) (5,887) (5,092) (13,739)
Continuous Improvement (Reinvest in IA processes)	(282)	(2,115)
Available Resource Time	<u>2,551</u>	<u>19.133</u>
Professional Services - Client Support Hours	(222)	(1,665)
Hours Available for Audit Plan	2,329	17,468*

^{*} Includes Manager and Director time







Audit Committee Update 2018 Internal Audit Budget

12/12/2017

Proposed 2018 IA Budget

	2018 Budget	2017 Budget	Explanation
Payroll* & Benefits	\$3,357,000	\$3,329,000	-Reflects full year of FTE costs and budget to fill open positions.
Training & Professional Fees	\$101,400	\$124,900	 - 60 hours professional development per team member as per IIA best practice. - Reduction in training budget due to in-house training scheduled through NYPA Technical Training Group.
Travel Expenses	\$38,900	\$39,400	
Consulting: - Co-Source Partner - Canals O&M - Compliance Audits - GRC Tool Support	\$1,100,000 \$500,000 \$100,000 \$0	\$1,100,000 \$750,000 \$100,000 \$150,000	 Co-Source budget for NYPA remains the same for 2018. Decrease in Canals O&M due to reliance on NYPA staff to conduct Canals audits upon hiring staff. GRC Tool budgeted for under Enterprise Risk Management.
Miscellaneous Office	\$12,000	\$12,000	
Total	\$5,209,300	\$5,605,300	

^{*}Payroll and co-source partner expense line item will change to reflect reallocation of cost once open positions are filled. The overall budget will remain substantially the same.



IA Budget Approval Request

IA request that the Audit Committee approve the 2018 Internal Audit Budget.

