

**MINUTES OF THE REGULAR MEETING  
OF THE  
AUDIT COMMITTEE**

**December 15, 2016**

**Table of Contents**

<b><u>Subject</u></b>	<b><u>Page No.</u></b>	<b><u>Exhibit</u></b>
<b>Introduction</b>	<b>2</b>	
1. <b>Adoption of Proposed Meeting Agenda</b>	<b>3</b>	
2. <b>Motion to Conduct an Executive Session</b>	<b>4</b>	
3. <b>Motion to Resume Meeting in Open Session</b>	<b>5</b>	
4. <b>Consent Agenda:</b>	<b>6</b>	
a. Approval of the Minutes of the Regular Meeting of July 26, 2016	7	
5. <b>Discussion Agenda:</b>	<b>8</b>	
a. Internal Audit Activity Report	8	<a href="#">5a-A</a>
b. 2017 NYPA Internal Audit Plan	11	<a href="#">5b-A</a>
c. 2017 Canal Corporation Internal Audit Plan	13	
d. 2017 Internal Audit Budget Plan	14	<a href="#">5d-A</a>
e. Presentation of Audit Plan - KPMG	15	<a href="#">5e-A</a>
6. <b>Next Meeting</b>	<b>19</b>	
Closing	20	

December 15, 2016

Minutes of the regular meeting of the New York Power Authority's Audit Committee held at the Clarence D. Rappleyea Building, 123 Main Street, White Plains, New York, at approximately 8:30 a.m.

**The following Members of the Audit Committee were present:**

Trustee Eugene Nicandri, Chairman  
Chairman John R. Koelme  
Trustee Anthony Picente, Jr.  
Trustee Anne M. Kress  
Trustee Tracy McKibben

**Also in attendance were:**

Gill Quiniones	President and Chief Executive Officer
Justin Driscoll	Executive Vice President and General Counsel
Robert Lurie	Executive Vice President and Chief Financial Officer
Jennifer Sutton	Senior Vice President – Internal Audit
Thomas Concadoro	Vice President and Controller
Karen Delince	Vice President and Corporate Secretary
Steve Gosset	Manager – Media Relations
Sylvia Louie	Manager – Executive Office
Frank Deaton	Senior Director - Internal Audit
Angela Gonzalez	Director - Internal Audit
Elaine Matthews	Audit Team Lead – Internal Audit
James Reynolds	Audit Team Lead - Internal Audit
Sarah Chen	Senior Auditor I - Internal Audit
Arvind Krishnaswamy	Senior Auditor - Internal Audit
Nishita Mody	Senior Auditor - Internal Audit
Karolina Rafelson	Senior Auditor - Internal Audit
Viviana Manzanares	Auditor - Internal Audit
Velvet Pierre	Auditor - Internal Audit
Rudina Shala	Auditor - Internal Audit
Syed Raza	Auditor - Internal Audit
Lorna Johnson	Senior Associate Corporate Secretary
Sheila Baughman	Senior Assistant Corporate Secretary
Gottor, Jaiah	Manager – Network Services
Joseph Rivera	Network Architect
Glen Martinez	Senior Network Analyst
Todd Fowler	Lead Engagement Audit Partner – KPMG
Nick Divirgilio	Lead Engagement Audit Senior Manager – KPMG

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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 McKibben and seconded by Authority Chairman Koelmel, the agenda for the meeting was adopted.

2. **Motion to Conduct an Executive Session**

***Mr. Chairman, I move that the Authority conduct an executive session pursuant to the Public Officers Law of the State of New York section §105 to discuss matters leading to the appointment, employment, promotion, demotion, discipline, suspension, dismissal or removal of a particular person or corporation.*** Upon motion made by Trustee McKibben and seconded by Authority Chairman Koelmel an Executive Session was held.

3. **Motion to Resume Meeting in Open Session**

***Mr. Chairman, I move to resume the meeting in Open Session.*** Upon motion made by Trustee McKibben and seconded by Authority Chairman Koelmel, the meeting resumed in Open Session.

4. **CONSENT AGENDA**

Upon motion made by Trustee McKibben and seconded by Authority Chairman Koelmel, the Consent Agenda was approved.

a. **Approval of the Minutes of the Regular Meeting held on July 26, 2016**

Upon motion made and seconded, the Minutes of the Committee's Regular Meeting held on July 26, 2016 were approved.



**5. DISCUSSION AGENDA:**

**a. Internal Audit Activity Report**

Ms. Jennifer Sutton, Senior Vice President of Internal Audit, provided an update of the Internal Audit ("IA") activities to the Committee (Exhibit "5a-A").

2016 Audit Plan Status

Ms. Sutton said that IA has made significant progress towards completing the 2016 Audit Plan. To date, 32 of the 44 reports have been issued and IA expects the majority to be issued by the end of the month. All reports will be issued by the first week of January.

*In response to a question from Authority Chairman Koelmel, Ms. Sutton said that, at this time, there is nothing significant or problematic that the committee needs to be aware of regarding the reports that are in progress.*

2016 Key Accomplishments

Ms. Sutton highlighted some of the key accomplishments of the IA department in 2016, which aligns with IA's transformation program, as follows:

**People**

- Onboarding of new team to refine and improve the audit methodology.
- Business acumen training to assist the team in becoming more aware of the utility industry and improving the soft skills that are necessary to accomplish IA's goals. Some of these training sessions were conducted with other utilities in the state in order to share knowledge and foster relationships and trade information across different utilities.
- Started succession and development planning.
- Launched IA's guest auditor program.
- Executed team building activities including a half-day session where the team volunteered at a local food bank and farm in Westchester.

**Process**

- Methodology Improvements and Efficiencies.
- Fraud - As part of IA standards, IA has formally developed a process for fraud considerations when planning and building out its work programs. IA is working with Mr. Joseph Gryzlo to ensure that the right fraud considerations are in place when planning its audits.
- Audit Liaison Program - IA has launched a Liaison Program with the executive management to further establish the team as business partners. IA staff has teamed with the executive leaders and their direct reports providing feedback and sharing

information with them in order to understand what is going on in the business units and address any emerging risks.

- Formal Management Program. IA has created a formal performance management program for the audit team and has executed more than 20 informal consulting activities.

## Technology

- IA has employed a Director for its Technology Department who will be responsible for building out that department in 2017.
- IA has successfully transitioned to its new third-party co-source provider.

IA will keep the lessons learned from the relationship with the previous co-source partnership as it transitions to a relationship with the new co-source partnership.

- IA is also co-leading a project with other risk management units to define a risk and control framework for NYPA and to develop a governance risk and control system in 2017. The implementation of that program will help create and bring together information from Risk Management and other groups into one system so that IA can have a better understanding of how the groups link together.
- IA has created an interim SharePoint site to track and report issues for mediation to management as well track themes and perform analytics on the types of findings that IA has identified.

*In response to a question from Authority Chairman Koelmel, Ms. Sutton said IA has a very good relationship with the Business Units. Several Business Units are undergoing transformation and increasing their maturity levels; as part of IA's Liaison program and its work through assessments and consulting, IA is able to provide feedback on risks and controls to the Business Units.*

*In response to a question from Chairman Nicandri, Ms. Sutton said IA will be requesting three additional team members to manage the additional workload as a result of the Canal Corporation integration into NYPA. With the exception of the Technology division, the skillset for the operational business portion of the Canal Corporation's audit plan will require the same skillset as IA's staff.*

*In response to a question from Authority Chairman Koelmel, Ms. Sutton said that to the extent there is a need for specific subject matter skillset for Canal audits that does not exist among IA staff IA will utilize its third-party resource. IA has developed the initial 2017 Canal Audit Plan and plans to conduct thorough risk assessments in Q1 to see what additional*

**December 15, 2016**

*skillset or audits may be necessary for Canal. In addition, since that expertise will not be used consistently throughout the year, it is better to use a third-party source, as necessary.*

**b. 2017 NYPA Internal Audit Plan**

Ms. Sutton provided the 2017 NYPA Internal Audit Plan to the Committee. (Exhibit “5b-A”)

Ms. Sutton said that in developing its Plan IA used an informal process where it interviewed stakeholders from all of the Business Units in order to understand what each Business Unit’s goals were and what significant changes they were expecting to happen in 2017. IA incorporated this information with the knowledge gained from its Audit Liaison program and ongoing relationships with the businesses, and prepared a comprehensive risk-based Audit Plan for 2017.

Planned Activities

- 45 Audit Activities have been scheduled for 2017. Twenty percent of those activities will be related to consulting; 24 percent to assessments and 56 percent to audits.

Resource Allocation

- Approximately 50 percent allocated to operational audits, 13 percent to financial audits, 16 percent to legal and regulatory audits and 20 percent to strategic audits.

Key Changes

- Building out the Internal Audit Technology Department. As IA build-out its skills with the Technology Auditors it will be able to reduce its reliance on third-party consultants as well as retain that knowledge in-house rather than giving it to consultants who may not be available for future audits.
- Perform more integrated audits to increase efficiency; and
- Support CFO’s financial acumen and cost savings initiatives.

**Key Initiatives for 2017**

- Audit Methodology. IA is continuing to refine and drive consistency in its audit methodology. IA has modified some of its standards, changing the audit methodology to make sure that they are aligned with the goals.
- Key Performance Metrics for Audit Activities. IA is in the process of identifying the metrics and key performance indicators to ensure that that the staff is staying on track. This will ensure more transparency in data provided to senior management.
- Governance, Risk and Compliance (GRC) System Implementation. IA will continue to co-lead with the Risk Management group on the implementation of the GRC system.
- Data Analytics. As part of building out the technology function and to improve the efficiency and accuracy of its audits, IA will be identifying and creating a strategy for data analytics, working with the other business units that create data analytic programs, and leverage and start piloting some limited data analytics programs for IA.
- Staff development and succession planning. IA will identify critical positions and develop succession plans for those critical positions documented and everyone is aware of the development plans for each staff member.

**December 15, 2016**

Internal Audit recommends that the Audit Committee approve the 2017 Canal Corporation Internal Audit Plan.”

Upon motion made by Trustee McKibben and seconded by Authority Chairman Koelmel the 2017 NYPA Internal Audit Plan was approved.

**c. 2017 Canal Corporation Internal Audit Plan**

Ms. Sutton provided the 2017 Canal Corporation Internal Audit Plan to the Committee. She said IA conducted a risk assessment process for Canal Corporation similar to what it did for NYPA by interviewing key stakeholders. IA has also been a part of the transformation and integration work streams in order to understand the risks associated with the processes. IA plans to conduct a more formal deep dive risk assessment in Q1 of next year to make sure that it has identified the key risks that exist within Canals and will modify the proposed Audit Plan, as appropriate.

IA is proposing that approximately 80 percent of its audit activities be related to audits and 20 percent to assessments. Of the 15 audits proposed, 8 or 53 percent of them are directly related to activities that are not expected to be repeated in the future.

Ms. Sutton ended by saying that, as a starting point for the Canals Internal Audit Plan, IA is requesting three additional employees and a consulting budget of \$500,000; this may fluctuate based on the risk assessment to be performed in Q1.

*In response to a question from Trustee McKibben, Ms. Sutton said that once the risk assessment into Canal is completed, IA will have a much better idea of where it stands with regard to staffing and budget in order to adequately perform Canal's audits.*

*In response to a question from Chairman Nicandri, Ms. Sutton opined that the integration team under Kimberly Harriman's and Tom Concadoro's leadership has done a good job of laying out key milestones and what needs to happen in every process. The Authority has proper documentation of what has been done in terms of lessons learned. After the Day One integration, staff can discuss what did or worked well, what didn't work well as it captures that knowledge for the future and pass it on to other relevant groups. She said IA has been performing audits, providing real time feedback to the teams on areas for improvement post Day One of the integration. Additionally, the Technology group has done some formal work with user access assignment as well as segregation of duty conflicts. IA has not identified anything that is critical to the integration process as yet.*

*In response to comments from Authority Chairman Koelmel, Ms. Sutton agreed that the Canal Corporations has a fairly limited audit function. Trustee Kress suggested that the members be provided an update on how the Canal Corporation have been governed and how the Authority plans to govern it, going forward.*

**d. 2017 Internal Audit Budget Plan**

Ms. Sutton provided the 2017 Internal Audit Budget Plan to the Committee. (Exhibit "5d-A")

Upon motion made by Authority Chairman Koelmel and seconded by Trustee McKibben, the 2017 Internal Audit Budget Plan was approved.

**e. Presentation of Audit Plan - KPMG**

Mr. Todd Fowler, KPMG's Audit Engagement Partner, presented the Audit Plan for the Authority's 2016 financial statements to the Committee (Exhibit "5e-A"). He said the Audit Plan is similar to the prior year plan. He then provided a review of the impact of the Canal integration in 2016, and going forward.

Mr. Fowler provided some insights on KPMG's involvement in 2016 as it relates to the Canal Corporation ("Canal") and how it will impact the team in 2017.

KPMG's advisory team has been assisting NYPA with the Canal separation and integration. He has been significantly involved with that advisory team in terms of monitoring KPMG's independence from a scope-of-work perspective and as it relates the level of fees for KPMG's audit work.

He had conversations internally at KPMG with the independence group as well as the larger New York State KPMG Audit and Advisory team to make sure they were comfortable with the advisory work KPMG was performing for the Authority in addition to the work as the Authority's auditor. In that perspective KPMG have no concerns.

He continued that he has biweekly conference calls with KPMG's advisory leads that are assisting the Authority with the transition to make sure that he is kept up to date with the transition and how it will impact KPMG's audit.

In addition to the Authority, KPMG performs advisory and audit work for New York State; therefore, KPMG wanted to make sure there were no conflicts working amongst all of those teams.

As part of their audit, KPMG also has to consider the accounting impacts as they relate to Canal in 2016 before the actual transition occurs and in 2017 when the transaction is actually effective.

Mr. Fowler said that he had discussions with Mr. Concadoro and his team regarding the accounting for the funding of the O&M expense and how it would be accounted for in the 2016 financial statements, and have come to an agreement on that process. He said they also discussed how the transfer of the assets will be accounted for in 2017 and have concluded on that process, as well.

*In response to a question from Authority Chairman Koelmel, Mr. Fowler said as the Authority's auditor, KPMG can provide advice and assistance to the Authority. However, KPMG cannot make management decisions for NYPA or be a project manager on its behalf. Therefore, it was critical that throughout the entire Canal integration process, NYPA be responsible for the project management and that all decisions were made by NYPA's management.*



Mr. Fowler continued that with respect to the IT system design and implementation, KPMG only provided NYPA with advice in terms of IT impacts of the transfer with Canals; KPMG did not participate in any internal control design or system implementation for NYPA.

Mr. Fowler ended by saying that as the scope-of-work evolves, KPMG's advisory team will have internal biweekly conference calls to make sure that there are no breeches of independence from the aforementioned perspectives.

Mr. Divirgilio provided highlights of KPMG's required communications for the 2016 audit which he said are consistent with the communications given in the past.

He then outlined the Client Service team and added that the team includes a new Quality Control review partner, Caroline Garcia. He said Ms. Garcia has significant experience in the power and utilities industry, specifically, with regulated entities.

Objectives of the Audit. KPMG's objective is to express opinion on the Authority's financial statements in accordance with generally accepted auditing standards as well as government auditing standards.

Risk Assessment. In addition to its substantive audit procedures, KPMG spends a significant amount of time reviewing controls. KPMG also reviews management assessments that involve judgment as to accounting treatment and accounting estimates as they relate to accounting for revenue, long-term debt, capital assets, pension and investments, asset retirement obligations, derivatives and others.

*In response to a question from Authority Chairman Koelmel, Mr. Divirgilio that there has been no key or significant changes to KPMG's Audit Plan from previous years. KPMG is still of the opinion that, from an audit perspective, the Authority, as it currently stands, without the Canals, has the same risk profile.*

**Audit Plan Scope-of-work.**

- KPMG's audit opinion on the financial statements. Reports to be issued also include:
  - o The Yellow Book Report which contains KPMG's, findings, if any, on the internal control environment at the Authority.
  - o Investment Compliance Test Report. This relates to the Authority's compliance with investment guidelines.

The Authority has not received grants that meet the threshold that would require KPMG to perform a single audit.

- Timeline. KPMG has gone through its risk assessment and planning procedures as well as the general IT control testing. KPMG has no findings to report to the Committee at this time. The team will continue its audit test work and standard procedures, and will issue its audit opinion as well as report its final results to the Committee at the March meeting.
- Involvement of Others and Specialists in the Audit and with the Authority. KPMG works with the Authority's Senior Vice President- Internal Audit and the Internal Audit team reviewing the Internal Audit reports and findings and working with the team to see how KPMG can integrate their work into its audit and, if necessary, to make any changes to audit scope based on their work.
- Specialists and service organizations used by the Authority.
  - o KPMG will assess the qualifications of the specialists used by the Authority and, to the extent necessary, KPMG will involve their internal specialists to assist with the audit and substantive procedures, e.g., KPMG utilizes internal valuation specialists to assist with the risk management activities for the derivative valuations.

*In response to a question from Authority Chairman Koelmel, President*

*Quiniones said 85% of CEOs said they were prepared, to a certain extent, for cyber events.*

*He indicated he believes the Authority is in the 90% range of preparedness for this evolving and changing landscape.*

*In response to further questioning from Authority Chairman, President Quiniones said, although the outlook for CEOs in the utilities industry indicates that they are more concerned that regulations will inhibit growth, at this point, the Authority is not impacted by regulations at the state level; however, there are federal regulations that will impact the Authority. Any changes in environmental regulations will also impact the Authority.*

*In response to a question from Chairman Nicandri, Mr. Driscoll said the Army Corp of Engineers is the primary regulator for the Canal Corporation.*

*In response to a question from Authority Chairman Koelmel, Mr. Fowler said that the Canal Corporation does not have a specific financial statement audit separate and apart from the Thruway Authority. The Corporation's financial statement audit is included within the Thruway Authority's financial statements.*

*In response to further questioning from Authority Chairman Koelmel, Mr. Fowler said that as part of KPMG's audit in 2017, KPMG will be requesting access to the audit work papers of the Thruway Authority's external auditors for its review.*

**6. Next Meeting**

Chairman Nicandri said that the next regular meeting of the Audit Committee would be held on March 21, 2017 at the Clarence D. Rappleyea Building in White Plains, New York, at a time to be determined.

**Closing**

Upon motion made by Trustee McKibben and seconded by Authority Chairman Koelmel, the meeting was adjourned by the Chairman at approximately 9:54 a.m.

*Karen Delince*

Karen Delince  
Corporate Secretary



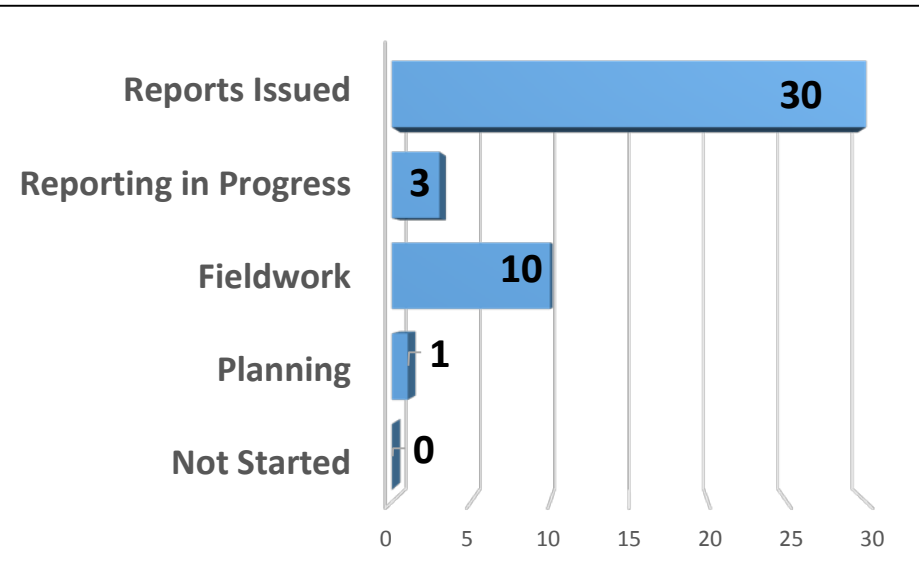
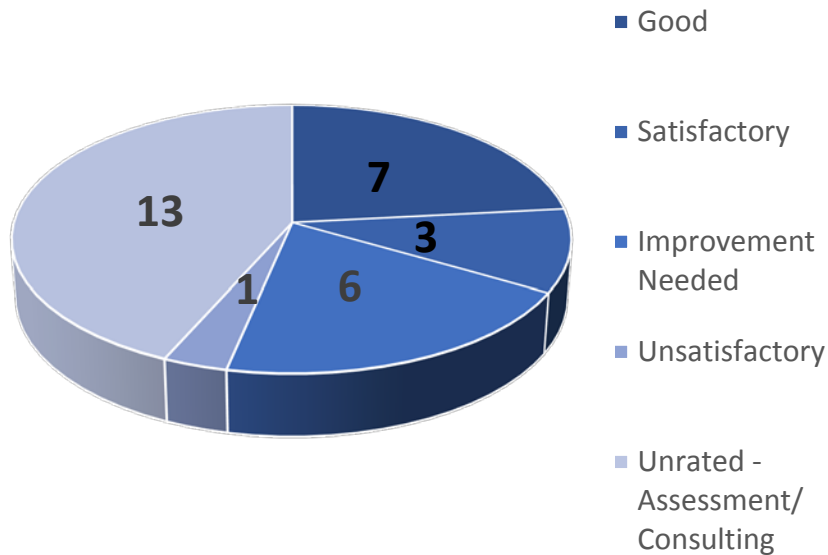
**NY Power  
Authority**

***Audit Committee Update  
Internal Audit Activity Report***

# 2016 Status Update

# 2016 Audit

- 2016 Plan Status:
  - Thirty of 44 audits have been issued as of 11/28/16.
  - Fieldwork for the remaining 14 audits will be complete by 12/16/16 and reports are expected to be issued by the end of December.
  - No significant risks have been identified on unissued reports at this time.





# 2016 Key Accomplishments

## People

- Continued onboarding and acclimation of new team members
- Conducted business acumen, soft skills and developmental trainings for the dept including a team tour of the SENY facility
- Started succession and development planning
- Guest Auditor launched with 5 colleagues participating in 3 audits
- Execution of several team building activities including a group community service event
- Obtained NASBA certification to issue CPE

## Process

- Methodology improvements and efficiencies designed. Planned roll out January 2017
- Introduced fraud considerations to audit programs
- Launched Audit Liaison Program to pair IA team members with EMC-1
- Created formal performance management program for audits
- Execution of over 20 informal Consulting activities

## Technology

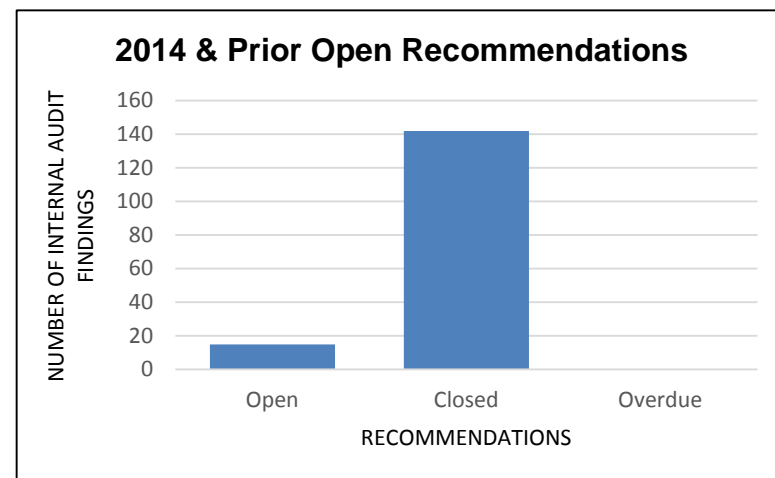
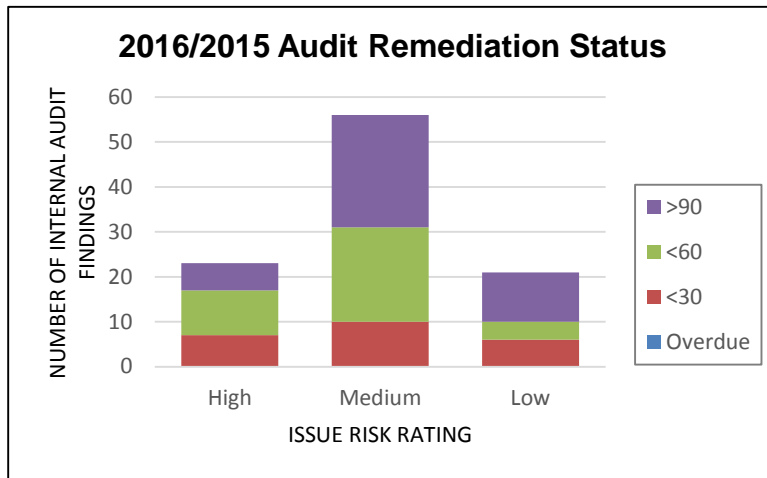
- Successfully transition third party co-source partner
- Hired IA Technology Director
- Designed go forward model to build out IA Technology group
- Co-leading project with other risk management units to design risk and control framework which will lead to GRC selection
- Design SharePoint site to track and monitor remediation. Planned rollout 2017

# Appendix

# Status of Audit Recommendations

- Below is the status of the 2016 and 2015 recommendations per rating of the individual findings.
- IA is comfortable with the status of open remediation.

2016-2015 Remediation	Total	High	Medium	Low
Remediation In Progress (IP)	138	61	56	21
IP - Overdue	0	0	0	0
IP – Due within <30 days	23	7	10	6
IP – Due within <60 days	31	6	21	4
IP – Due within >90 days	84	48	25	11
Remediation not Started	0	0	0	0



\*As ratings have been established for 2015 reports onwards, recommendations prior to 2015 do not include risk ranking for recommendations.





**NY Power  
Authority**

***Audit Committee Update  
2017 NYPA Internal Audit Plan***

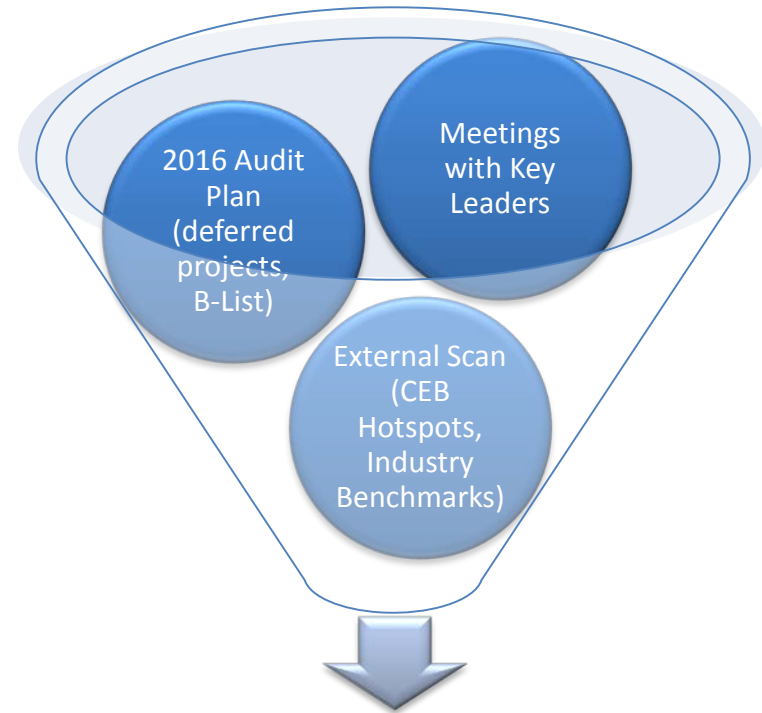
# Executive Summary

## Annual Planning Goal

**Define a 2017 Audit Plan that reflects on the following:**

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

## Process Inputs

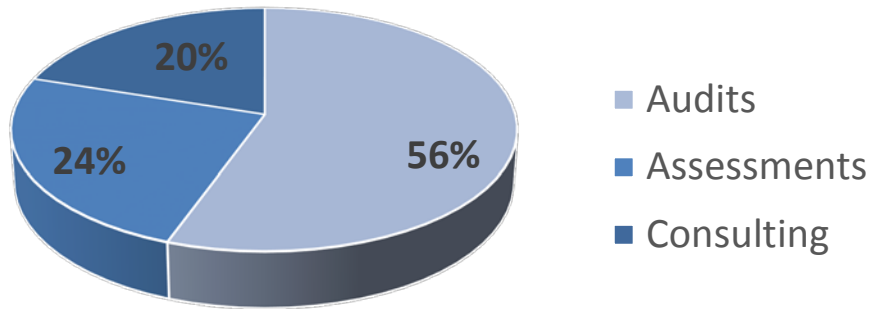


**EMC Review & Audit Committee Approval**

# Proposed 2017 Plan - Coverage

## 2017 Planned Activities

45 projects in the Proposed 2017 Audit Plan



## 2017 vs 2016

Planned activities:

	2017 Plan	2016 Actual
Assessments	11	10
Audits	25	29
Consulting	9	5
<b>Total</b>	<b>45</b>	<b>44</b>

## Activity Definitions

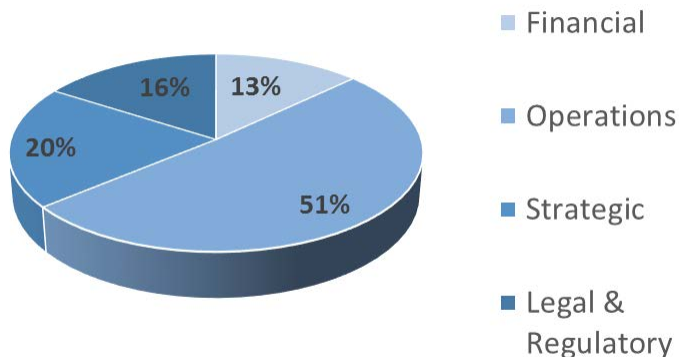
- **Audit:** A look back - independent assessment of the performance of NYPA's risk management, control, and governance processes
- **Assessment:** A look forward - advisory assessment, focused on process improvement opportunities, risk identification and mitigation within new processes or initiatives
- **Consulting:** Ongoing - consulting and partnering arrangements that result in documented feedback or real time verbal feedback.

## Proposed 2017 Plan - Allocation

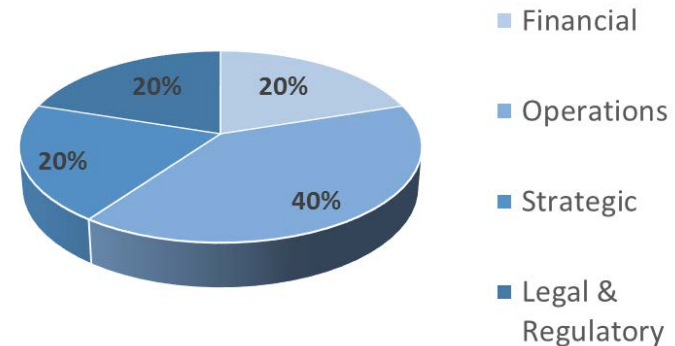
**Resource Allocation: 45 projects are included based on resource availability**

Resource Allocation	Business	Technology
Actual Resource hours available	16,400	2,100
Budgeted Third Party hours available	200	4,200
<i>Proposed 2017 Audit Plan Hours</i>	16,600	6,300

### 2017 Planned Allocation



### Goal Allocation



Difference between 2017 Planned Allocation and Goal Allocation is due to the volume of strategic initiatives and significant projects in the Utility Operations Business Unit.

# Proposed 2017 Plan – Changes for 2017

Key Changes	Discussion
Build NYPA IA Technology Capabilities	<ul style="list-style-type: none"> <li>- In 2016, hired experienced Technology Director responsible for execution of the 2016 Plan through Deloitte co-source partnership.</li> <li>- Two positions are posted and are in recruitment.</li> <li>- Requested three (3) additional headcount in 2017 budget to hire internal resources which will lead to reduced reliance on and cost of co-sourced partner.</li> </ul> <p>Benefits will include:</p> <ul style="list-style-type: none"> <li>- Enhanced relationship and knowledge management</li> <li>- Improve coverage over general technology controls</li> <li>- Increased ability to provide technology consulting</li> <li>- Build strong technology skills within NYPA</li> </ul>
Integrated Audits	<ul style="list-style-type: none"> <li>- 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.</li> </ul>
Support Financial Acumen & Cost Savings Initiatives	<ul style="list-style-type: none"> <li>- Examples of proposed 2017 Audits to reinforce NYPA's financial acumen emphasis include Cost Allocations, Financial Performance Metrics, and Generator Variable Costs.</li> <li>- Examples of proposed 2017 Audits to support management's assessment of potential cost cutting include Telecom Cost Recovery Project and Third Party Contract Audits.</li> </ul>



# Key Initiatives for 2017

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## Audit Methodology

- Continue refining & improving methodology to drive consistency in audit execution

## Key Performance Metrics for Audit Activities

- Define key metrics & goals for audit activities

## GRC Tool

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

## Data Analytics

- Identify strategy for IA data analytics for full implementation in 2018 with pilots in Q3/Q4

## Staff Development Plans/Succession Planning

- Develop succession plans and development plans for each team member

## Recommendation

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*IA recommends that the Audit Committee approve the 2017 NYPA Internal Audit Plan.*

# Appendix A - Proposed 2017 Audit Plan

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
1	Enterprise Portfolio Management Design Assessment	Assessment	Entity-Wide	Lack of alignment of various functional areas working to establish Portfolio Management solutions could lead to inefficiencies and excessive costs to NYPA.	Evaluate portfolio management functions in existence or being developed across NYPA to improve prioritization and management of the broad range of nonrecurring projects to confirm common vision, framework and alignment of outcomes. Ensure 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	Q3
2	Cyber Security Roadmap Consulting Support	Consulting	Technology	Failure to properly implement the workstreams of the cyber security roadmap will not elevate NYPA's security posture and lead to potential cyber security events.	Review the progress of roadmap workstreams in accordance with their timeline for the cyber security roadmap rollout. Determine if the rollout for each workstream is meeting its objectives, milestones and proper controls have been incorporated and documented. Audit coverage for NERC CIP Audit Prep Support and Cloud Security are covered under separate engagements as continuations from 2016.	Operations	High	Ongoing
3	SAP Basis Administration	Audit	Technology	Lack of proper configuration for SAP Basis can lead to 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
4	Cyber Security Services Function Design Support	Consulting	Technology	Poorly designed organizational structure, processes and procedures for the Cyber Security Engineering & Architecture, Operations, Governance & Strategy and Compliance Operations functions can lead to non-compliance with regulations, decrease the success of the rollout and NYPA's security posture.	Cyber security function development in progress in 2016 and will be rolled out in 2017. Evaluate the organizational structure and function of Engineering & Architecture, Operations, Governance & Strategy and Compliance Operations to ensure proper controls have been incorporated.	Operations	High	Q2
5	Transmission Cost of Service	Audit	Entity-Wide	Lack of repeatable process for filing Transmission Cost of Service could lead to the inefficient use of resources and unrecovered costs.	Assess the validity and accuracy of cost of service data inputs to ensure accuracy and completeness of costs used to develop the cost of service. Evaluate the adequacy and effectiveness of controls established to both prepare and file the annual transmission cost of service to ensure sustainable and that controls exist to ensure accuracy and completeness of rate case filings.	Operations	High	Q2

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
6	Hydro Forecast Process	Audit	Operations	Inaccurate hydro volume forecasts lead to suboptimal resource allocation decisions.	Evaluate controls over the hydro forecasting process to ensure forecasting best practices are being followed, forecast inputs are complete and accurate, and transparency in the assumptions and judgments used.	Operations	High	Q1
7	HTP Operations	Audit	Commercial Operations & Energy Solutions	Lack of transparency or understanding by NYPA in costs to operate and maintain the line leading to unexpected or increasing operating losses. Poor vendor performance leading to suboptimal line utilization and financial results.	Ensure controls in place to manage the operations and maintenance of the HTP line are adequate and working effectively. This audit will include evaluating NYPA's controls to oversee compliance with the terms and conditions in the third party vendor contract with ConEd Solutions: - compliance with policies and procedures - oversight of line operations vendor (ConEd Solutions) - transparency in performance to assist management in long-term decision-making - all costs are accurately budgeted and consistent with contract terms	Financial	High	Q1
8	Resource Loaded Scheduling	Assessment	Operations	Lack of credible information to support resource utilization and needs could lead to suboptimal resource allocation decisions.	Verify the accuracy and completeness of resource loaded schedules being developed within Operations to support the results as a credible source for future resource allocation decisions.	Strategic	High	Q4
9	Ariba System Implementation - Contract Lifecycle Management Module	Audit	Technology	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 pre/post implementation activities to ensure the Ariba Contract Lifecycle Management module has proper business requirements, system configuration, interfaces, systems and user acceptance testing, system security and overall project management. In addition, provide support for the development of contract management processes to ensure effective controls are incorporated. In addition, the audit will include post implementation audit activities to determine if project objectives were met, user satisfaction, additional changes made after go live and system performance.	Operations	High	Ongoing
10	Generator Variable Costs	Assessment	Entity-Wide	Inaccurate or incomplete generator variable cost data could lead to generator's not being optimally positioned in the market.	Verify the accuracy and completeness of variable costs for NYPA's generating assets and confirm actual variable costs exist at the NYISO as required in the NYISO's Reference Level Manual to optimally position the assets.	Financial	High	Q1
11	Deferred Asset Accounting	Audit	Business Services	Unreconciled suspense accounts could lead to aging of receivables or other potentially accounting entries that are not written off in a timely manner.	Review deferred asset accounts used as suspense to hold customer or other receivables to confirm reconciliation and that aged items are identified, escalated and resolved.	Financial	High	Q2

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
12	New York Energy Manager	Audit	Commercial Operations & Energy Solutions	Strategic investment does not yield desired results leading to negative impact to NYPA'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	Q2
13	Employee Data Protection	Audit	HR & Enterprise Shared Services	Lack of proper controls in place to ensure sensitive employee data such as SS#, date of birth etc. has not been disclosed can lead to employee identity theft and reputational damage to NYPA.	Evaluate the controls governing employee data to ensure Personally Identifiable Information (PII) and Protected Health Information (PHI) is protected from compromise in accordance with NYPA's policies and procedures and industry regulations such HIPAA, US Privacy Act, Identity Theft Prevention Act and other regulations.	Legal and Regulatory	High	Q3
14	Success Factors System Implementation	Audit	Entity-Wide	Ineffective project management and system development lifecycle controls can lead to project delays, cost overruns and poor system performance. In addition, IT will not effectively assist the business in meetings its strategic objectives.	Review pre/post implementation activities to ensure the Success Factors modules have proper business requirements, system configuration, interfaces, systems and user acceptance testing, system security and overall project management.	Operations	High	Ongoing
15	Operating System Security	Audit	Technology	Failure to have effective security, configuration, monitoring and standardized procedures for Windows, UNIX and Linux operating systems can lead to unauthorized access, system compromise and unavailability.	Reviews the controls over the Windows, UNIX and Linux operating system environments including evaluating processes and standards for OS administration, logical access, process consistency, system monitoring, change control, continuity of operations. Also, review of configuration settings against defined policies and industry best practices. Audit coverage would be for IT and OT.	Operations	High	Q1
16	Emergency Management Governance Assessment	Assessment	Entity-Wide	Lack of alignment of various functional areas working to establish emergency management, business resiliency, business continuity, disaster recovery and incident response solutions could lead to inefficiencies and excessive costs to NYPA.	Evaluate emergency management related functions (emergency management, business resiliency, business continuity, disaster recovery and incident response) being created or reengineered across NYPA to confirm common vision, framework(s) and alignment.	Operations	High	Q2
17	Niagara SCADA Upgrade	Audit	Operations	Failure to follow configuration management procedures for the Niagara SCADA upgrade can result with the system's inability to detect operational failures, send alerts and potentially allow unauthorized access to the system.	Review pre/post implementation activities to ensure the Niagara SCADA upgrade has been properly configured in accordance with vendor specifications, factory acceptance and site tested, approved, and incorporated security measures in accordance with OT's configuration management procedures.	Operations	High	Ongoing

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
18	IT Disaster Recovery (DR)	Audit	Technology	Ineffective disaster recovery procedures can lead to unrecoverable business functions and systems in the event of a disaster.	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	Q3
19	LPGP LEM	Audit	Operations	Inefficient or ineffective project management activities could result in suboptimal use of resources and projects that do not meet objectives.	Large Construction Project Audit - ensure project risks are being identified and mitigated, project is conducted consistent with CEAR/approval, that management is aware of the project's status and that significant vendors or contractors are not overbilling NYPA and are performing in accordance with contract terms.	Operations	High	Q4
20	SDLC Roadmap Support	Consulting	Technology	Failure to not develop the SDLC roadmap can result with continued immaturity levels for system development lifecycle, project management procedures and no visibility to project quality.	Assist management with the development of the SDLC roadmap to address the recommendations made in the 2016 SDLC audit.	Operations	High	Q1
21	ISO 55000 Framework Design Support	Consulting	Operations	Lack of clear understanding and plan to comply with ISO55000 could result in the suboptimal allocation of Authority resources and the desired certification not being obtained.	Provide support to Operations as they develop a framework 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 a clear and consistent strategy for providing assurance in accordance with the standard. Internal Audit will invest in the Internal Audit team including the required training and certifications necessary to support NYPA's desired 2018 compliance date.	Strategic	High	Ongoing
22	Cost Allocations	Audit	Entity-Wide	Inaccurate cost allocations could lead to suboptimal or uninformed business decisions.	Evaluate the adequacy and effectiveness of cost allocation controls 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 judgments in the cost allocation process exist, evaluate support for judgments for reasonableness. Areas of consideration for cost allocation include but are not limited to headquarters/overhead costs as well as the allocation of costs to assets supported by shared resources such as transmission, small hydros, and in-city units.	Strategic	High	Q3

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
23	System Testing Management	Audit	Technology	Limited and undocumented system and UAT testing can result in user dissatisfaction and increased cost to fix system issues.	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.	Operations	Medium	Q2
24	Customer Credit	Assessment	Entity-Wide	Customer default could lead to unexpected or unplanned losses to NYPA.	Ensure controls in place to both extend credit to customers and manage credit instruments are designed adequately and working effectively. Assess NYPA's intention, ability and timing to allow customers to obtain credit from other funding sources as a means of reducing its customer default risk. Evaluate controls over governmental customers that are not credit assessed and determine if credit policy is being applied to riskier customers. Evaluate the support for management's judgments related to loss reserves as well as the accounting treatment of both the credit instruments and any associated losses.	Operations	High	Q2
25	2016 OSC Audit - Remediation Follow-up	Audit	Entity-Wide	Lack of execution of agreed upon remediation to OSC findings could lead to an increased OSC presence and negative public and stakeholder opinion of NYPA.	Follow-up on agreed upon OSC Audit remediation activities to ensure implementation is complete or action plans are on track to resolve in a timely manner.	Legal and Regulatory	High	Q4
26	NERC CIP Audit Prep Support	Consulting	Operations	Failure to comply with NERC CIP v5/6 requirements may result with regulatory fines/penalties and increased regulatory scrutiny.	Provide audit prep support for the NERC CIP v5/6 audit by the NPPC in December 2017. Determine if the documentation and staff knowledge are adequate for compliance with NERC CIP standards.	Legal and Regulatory	High	Ongoing
27	Transitional Position Utilization Assessment	Assessment	HR & Enterprise Shared Services	Unclear or inconsistent utilization of transitional positions could result in unmitigated resource/succession planning risks.	Assess the utilization of transitional positions as a key mitigation to NYPA's resource/succession planning risk. Ensure NYPA has clearly defined procedures for how business units are to leverage this mitigation tool as a part of their risk management effort.	Operations	High	Q3
28	AGILE Strategic Initiative	Audit	Entity-Wide	Strategic investment does not yield desired results leading to unrecovered costs and impaired reputation.	Confirm NYPA is managing its investment in AGILE in accordance with the Board of Trustee's authorization. Confirm transparency to the Trustee's in management's compliance activities.	Strategic	High	Q3
29	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 Initiative business plan is revised and implementation efforts are initiated to ensure controls being established are adequate to mitigate NYPA's operational and financial risks.	Strategic	High	Ongoing
30	Third Party Contract Audits	Audit	Entity-Wide	Third party vendor nonperformance 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 our audits rights to confirm performance in accordance with contract terms including accuracy of invoicing and contract deliverables.	Operations	High	Ongoing



# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
31	Generator Meter to Cash	Audit	Entity-Wide	Inaccurate or incomplete generator metering and settlement could lead to suboptimal financial results.	Evaluate from generator meter to the collection of cash that controls are designed adequately and working as expected to ensure the accuracy of the settlement with direct and market based sales for both energy and ancillary services. Processes and related handoffs between the following groups are in scope: Metering, Generation Bidding, NYISO Settlements, Accounting, Information Technology, etc.	Operations	High	Q3
32	Physical Security Investments Assessment	Assessment	Operations	Significant physical security investments did not meet intended objectives.	Assess NYPA's actual to stated objectives in the physical security infrastructure/technology upgrades over the last two years. Ensure change management initiatives to enable end users were adequate and had the desired results.	Operations	High	Q1
33	Business Development Governance	Assessment	Entity-Wide	Lack of alignment of various functional areas working to improve NYPA's business development activities could lead to inefficiencies and excessive costs to NYPA.	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.	Strategic	High	Q3
34	Project Management Methodology Assessment	Assessment	Entity-Wide	Lack of an effective project management framework/methodology can result with incorrect or no project prioritization, allocation of funds/resources to the wrong projects, delayed implementations, cost overruns and strategic objectives not met.	Enterprise-wide assessment of project management frameworks/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.	Operations	Medium	Q4
35	IT KPI and Metric Development	Consulting	Technology	Lack of KPIs and metrics to measure IT service delivery, effectiveness and efficiency can lead to duplicative procedures, service delivery delays, increased cost and user dissatisfaction.	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.	Operations	Medium	Q1
36	Telecom Cost Recovery Project	Audit	Technology	Inadequate monitoring of complicated telecommunications bills could lead to significant overcharges.	Evaluate telecommunications charges to identify and potentially recover overbillings.	Financial	High	Q2
37	Financial Performance Metrics	Audit	Business Services	Inaccurate or incomplete data supporting new financial performance metrics could lead to uninformed management decisions.	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.	Financial	High	Q2

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
38	Customer Contract Design Review Support	Consulting	Entity-Wide	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 being renegotiated and contracts terms are being developed to ensure adequacy of contract controls..	Legal and Regulatory	High	Ongoing
39	Enterprise Risk Mitigation/Action Plan Follow-up	Assessment	Entity-Wide	Lack of transparency in the mitigation of Top Enterprise Risks and/or unresolved action plans could lead to uninformed management decisions or the unexpected realization of significant risks.	For a sample of mitigation and action plans identified during the 2016 Enterprise Risk workshops, ensure that mitigation activities are accurately defined and working as committed to by responsible management and that action plans are complete or remain on track to resolution commitment dates.	Strategic	High	Q1
40	Muni/Coop Regulation Audit	Audit	Economic Development & Energy Efficiency	New/changing business requirements for municipal and cooperative customers could result in increased litigation, external stakeholder influence and impaired reputation to NYPA.	Ensure NYPA's regulation of full requirements and monitoring/oversight of partial requirements municipal and cooperative is adequate and effective.	Legal and Regulatory	High	Q1
41	Grants & Sponsorship Compliance	Audit	Entity-Wide	Noncompliance with company policies governing grants and sponsorships could lead to impaired reputation and sanctions by state governing bodies.	Evaluate compliance with company policy 2-16 Business Related Contributions and 11-1 Contributions and Sponsorships.	Legal and Regulatory	Medium	Q1
42	Customer Compliance Audits (D&M)	Audit	Commercial Operations & Energy Solutions	Noncompliance with Recharge NY and other power allocation program (EP, RP, etc.) legislation could lead to increased regulatory scrutiny and negative impact to NYPA's reputation.	Recurring customer audits for NYPA Marketing Department to support compliance program.	Legal and Regulatory	Medium	Ongoing
43	Post Retirement Benefits Assessment	Assessment	Business Services	Unsupported judgments used in determining post retirement benefits costs to NYPA could lead to over or underfunding of post retirement benefit accounts.	Evaluate the support for judgments made by NYPA related to post retirement benefits and ensure proper accounting treatment.	Financial	Medium	Q2
44	Marketing/Sales Culture Survey	Consulting	Commercial Operations & Energy Solutions	Lack of achievement of marketing goals and objectives due to ineffective change management.	Conduct a culture survey to evaluate how Authority personnel that are responsible for interfacing with customers understand changing expectations, the tools available to engage customers and NYPA's sales objectives.	Strategic	Medium	Q3
45	Office 365	Audit	Technology	Lack of proper security controls for cloud solutions can lead to unauthorized access to sensitive data, system compromise potentially damaging NYPA's reputation.	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.	Operations	High	Q4

# Appendix B - 2017 Risk Assessment – Projects Considered But Not Included in Plan

## Appendix B - 2017 – Projects Considered but Not Included in Plan

#	Proposed Project	Description/Preliminary Scope	Action
1	Whistleblower and Anti-Retaliation	Follow-up to 2014 Ethics & Claims Management Audit findings to confirm adequacy and effectiveness of mitigation efforts. Evaluate NYPA's compliance with CP1-7 - Anti-Retaliation Policy.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
2	Customer Data Protection	Evaluate the controls governing customer data to ensure customer data is protected from compromise in accordance with NYPA's policies and procedures and industry standards.	Commerical customers and other state agency customer data does not pose as high a risk for identity theft as employee data and can be looked at in future audits.
3	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 employee data and can be looked at in future audits.
4	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.	Some Cyber Assessments covered email security in 2015 at a high level. Cyber Security also conducts phishing exercises throughout the year. May have some coverage under the Cyber Security -Data Loss Prevention consulting engagement. Full audit will be done in future audits.
5	IT Incident and Problem Management	Evaluate the effectiveness of Incident and Problem management processes and governance activities to identify and correct (both short and long-term) problems and incidents encountered in the delivery of IT services in a timely manner. The review also includes the process for conducting root cause analysis for end user and production problems and determining incidents were appropriately promoted to change tickets.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
6	IT Production Support Management	Review the processes and procedures in place for IT to provide effective production support for its SAP and non-SAP systems. Determine if production issues are handled timely, tracked and communicated to its stakeholders to	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.

## Appendix B - 2017 – Projects Considered but Not Included in Plan

#	Proposed Project	Description/Preliminary Scope	Action
7	Network Administration	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.	Partial coverage under the Cyber Assessment Remediation Validation audit in 2016. Additional coverage will be part of the Cyber Security roadmap consulting engagement.
8	North Country Economic Development Plan Compliance	Ensure the Authority is complying with all agreed upon terms of the economic development plan.	Authority supports but does not own the Plan. Efforts to move Plan forward are underway - audit in 2018.
9	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.	Audit will provide consulting support as Marketing develop's a framework and program. Not considered significant enough investment to warrant inclusion in 2017 Audit Plan.
10	Event Management Process Assessment	Evaluate processes that exist at the Authority for planning and executing public events to ensure clarity of roles and responsibilities as well as consistency of communications.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
11	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 2017 if risk or Audit resource levels change.
12	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.	Data Loss Prevention will be reviewed as part of the Cyber Security Roadmap consulting engagement.

## Appendix B - 2017 – Projects Considered but Not Included in Plan

#	Proposed Project	Description/Preliminary Scope	Action
13	Energy Information Administration Report 923 Compliance	Ensure accuracy and completeness of the Authority's EIA 923 report. Evaluate the adequacy and effectiveness of compliance reporting controls.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
14	Manual Check Processing	Ensure the adequate and effective handling of checks received by the Authority.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change or combine as part of broader Treasury Audit in 2018.
15	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 2017 if risk or Audit resource levels change.
16	Virtualized Computing	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.	Audit coverage in 2014 for Infrastructure Virtualization.
17	Community Settlements	Evaluate the adequacy and effectiveness of controls in place to ensure financial payments and other negotiated settlements are being met by the Authority in accordance with agreement terms. Confirm the accuracy and completeness of financial payments and ensure appropriate accounting treatment.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
18	Cost of Service and Rate Model Design Support	Provide support to Business Services as they update both cost of service and rate models to ensure spreadsheet controls are adequately designed.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.

## Appendix B - 2017 – Projects Considered but Not Included in Plan

#	Proposed Project	Description/Preliminary Scope	Action
19	Lease Accounting Assessment	Evaluate management's assessment of NYPA's portfolio of leases including any key metrics (such as leverage ratios) used in determining classification of leases affected by the new accounting standards. In addition assess mitigation for potential impact on banking covenants and other debt instruments resulting from any revised metrics.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
20	Wheeling Expense	Evaluate the adequacy and effectiveness of controls to ensure the accuracy of wheeling charges and the proper allocation of costs to customers.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
21	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 2017 if risk or Audit resource levels change.
22	Remote Access	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.	Last audited by EY. To be audited in 2018.
23	Energy Commodity Risk Solution Implementation Support	IA to be embedded in the proposed project to implement an energy commodity risk management tool at NYPA to resolve gaps between current and future state strategies.	Scope and timing remain in development as of audit plan development date. Will move to 2017 Plan if/when project scope is finalized.
24	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.	Medium risk activity. Remediation activities expected to be completed by 4Q17. Follow-up will be a 2018 project.

# 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 with the greatest Canals integration impact:

Area	Project
Operations	<ul style="list-style-type: none"> <li>• SAP Basis Administration</li> <li>• Hydro Forecast Process</li> <li>• Operating System Security</li> <li>• SDLC Roadmap Support</li> <li>• Physical Security Investments Assessment</li> <li>• IT KPI and Metric Development</li> </ul>
Strategy	<ul style="list-style-type: none"> <li>• Enterprise Risk Mitigation/Action Plan Follow-up</li> </ul>
Financial	<ul style="list-style-type: none"> <li>• Generator Variable Costs</li> <li>• HTP Operations</li> </ul>
Legal and Regulatory	<ul style="list-style-type: none"> <li>• Muni/Coop Regulation Audit</li> <li>• Grants &amp; Sponsorships Compliance</li> </ul>

## Appendix C – Plan Alignment to Strategic Initiatives

Strategic Initiative	Projects
AGILE Labs	<ul style="list-style-type: none"> <li>AGILE Strategic Initiative</li> </ul>
Asset Management	<ul style="list-style-type: none"> <li>ISO 55000 Framework Design Support</li> <li>Physical Security Investments Assessment</li> <li>LPGP LEM</li> </ul>
Customer Energy Solutions	<ul style="list-style-type: none"> <li>Customer Credit</li> <li>Customer Energy Solutions Redesign Support</li> </ul>
Knowledge Management	<ul style="list-style-type: none"> <li>None</li> </ul>
New York Energy Manager	<ul style="list-style-type: none"> <li>New York Energy Manager</li> </ul>
Process Excellence	<ul style="list-style-type: none"> <li>Enterprise Portfolio Management Design Assessment</li> <li>Ariba System Implementation – Contract Lifecycle Management Module</li> <li>Emergency Management Governance Assessment</li> <li>Business Development Governance</li> <li>Project Management Methodology Assessment</li> <li>IT KPI and Metric Development</li> </ul>
Smart G&T	<ul style="list-style-type: none"> <li>None</li> </ul>
Workforce Development Center	<ul style="list-style-type: none"> <li>None</li> </ul>
Workforce Planning	<ul style="list-style-type: none"> <li>Resource Loaded Scheduling</li> <li>Success Factors System Implementation</li> </ul>

## Appendix C - Plan Alignment to Top Enterprise Risks

Top Enterprise Risk	Projects
Attract and Sustain Qualified Workforce	<ul style="list-style-type: none"> <li>• Success Factors System Implementation</li> <li>• Transitional Position Utilization Assessment</li> <li>• Resource Loaded Scheduling</li> </ul>
Catastrophic Events	<ul style="list-style-type: none"> <li>• Emergency Management Governance Assessment</li> <li>• IT Disaster Recovery (DR)</li> </ul>
Critical Infrastructure Failure	<ul style="list-style-type: none"> <li>• LPGP LEM</li> <li>• ISO 55000 Framework Design Support</li> <li>• Physical Security Investments Assessment</li> </ul>
Customer Energy Choices	<ul style="list-style-type: none"> <li>• New York Energy Manager</li> <li>• Customer Credit</li> <li>• Customer Energy Solutions Redesign Support</li> <li>• Customer Compliance Audits (D&amp;M)</li> <li>• Marketing/Sales Culture Survey</li> </ul>

## Appendix C - Plan Alignment to Top Enterprise Risks (cont.)

Top Enterprise Risk	Projects
Cyber Security	<ul style="list-style-type: none"> <li>• Cyber Security Roadmap Consulting Support</li> <li>• SAP Basis Administration</li> <li>• Cyber Security Services Function Design Support</li> <li>• Operating System Security</li> <li>• Niagara SCADA Upgrade</li> <li>• Office 365</li> </ul>
Disruptive Innovation	<ul style="list-style-type: none"> <li>• AGILE Labs</li> </ul>
Hydro Flow Volumes	<ul style="list-style-type: none"> <li>• Hydro Forecast Process</li> </ul>
Regulatory/Legislative Environment	<ul style="list-style-type: none"> <li>• Employee Data Protection</li> <li>• NERC CIP Audit Prep Support</li> <li>• Muni/Coop Regulation Audit</li> </ul>
Reputation	<ul style="list-style-type: none"> <li>• 2016 OSC Audit Remediation Follow-up</li> <li>• Grants &amp; Sponsorship Compliance</li> </ul>
Sustained Lower Power Prices	<ul style="list-style-type: none"> <li>• Generator Variable Costs</li> </ul>

## Appendix C - Plan Alignment to NYPA Financial Strategy

Financial Strategy	Projects
Financial Acumen	<ul style="list-style-type: none"> <li>• Cost Allocations</li> <li>• Enterprise Portfolio Management Design Assessment</li> <li>• Financial Performance Metrics</li> <li>• Generator Meter to Cash</li> <li>• Generator Variable Costs</li> <li>• HTP Operations</li> <li>• LPGP LEM</li> <li>• Transmission Cost of Service</li> </ul>
Potential Cost Savings Initiatives	<ul style="list-style-type: none"> <li>• Emergency Management Governance Assessment</li> <li>• ISO 55000 Framework Design Support</li> <li>• Telecom Cost Recovery Project</li> <li>• Third Party Contract Audits</li> </ul>

## Appendix C - Plan Internal Resource Allocation

	# of Days	# of Hours
Total Available Time	4,990	37,425
Non-Audit Time		
- Training/Professional Development	(388)	(2,910)
- Vacation/Sick/Holidays	(817)	(6,128)
- Administrative (includes vacancy factor)	<u>(665)</u>	<u>(4,987)</u>
Total – Non-Production Time	<u>(1,870)</u>	<u>(14,025)</u>
Continuous Improvement (reinvest in IA processes)	(289)	(2,168)
Available Resource Time	<u>2,831</u>	<u>21,233</u>
Consulting Hours	(212)	(1,590)
Hours Available for Audit Plan	2,619	19,642*

\* Includes Manager and Director time

**Internal Audit**



**NY Power  
Authority**

# ***Audit Committee Update 2017 Internal Audit Budget***

## Proposed 2017 IA Budget

	2017 Budget	2016 Budget	Explanation
Payroll* & Benefits	\$3,329,000	\$2,565,400	Increase reflects first full year of FTE Costs and filling open positions.
Training & Professional Fees	\$124,900	\$83,300	60 hours professional development per team member – reflects IIA best practice. Added Corporate Executive Board Audit Leadership Council membership in 2017.
Travel Expenses	\$39,400	\$38,800	Increase to reflect actual 2016 experience.
Consulting:			Co-Source reduction offset by increase in internal head count.
- Co-Source Partner*	\$1,100,000	\$1,500,000	GRC Tool support reflects commitment to internal efficiencies working with other risk management units.
- Compliance Audits	\$100,000	\$110,000	
- GRC Tool Support	\$150,000	\$20,000	
Miscellaneous Office	\$12,000	\$11,000	
<b>Total</b>	<b>\$4,855,300</b>	<b>\$4,328,500</b>	

\* Internal Audit's Proposed 2017 Budget includes the addition of three FTE to fill out the technology audit team. When approved, the payroll and co-source partner expense line items will change to reflect this reallocation of cost. The overall budget will not increase and will remain substantially unchanged.



# Recommendation

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*IA recommends that the Audit Committee approve the 2017 Internal Audit Budget.*



# New York Power Authority Audit plan December 31, 2016

**This presentation to the Audit Committee is intended solely for the information and use of the Audit Committee and management and is not intended to be and should not be used by anyone other than these specified parties. This presentation is not intended for general use, circulation or publication and should not be published, circulated, reproduced or used for any purpose without our prior written permission in each specific instance.**

December 15, 2016

# Agenda

**1.0 Client Service Team**

**2.0 Objective of an audit**

**3.0 Risk Assessment**

**4.0 Audit Plan**

**5.0 KPMG's Audit Committee Institute and Global Energy Institute**

## **Appendices**

**A.1 Responsibilities**

**A.2 KPMG's audit approach and methodology**

**A.3 Materiality**

**A.5 Audit Fees**

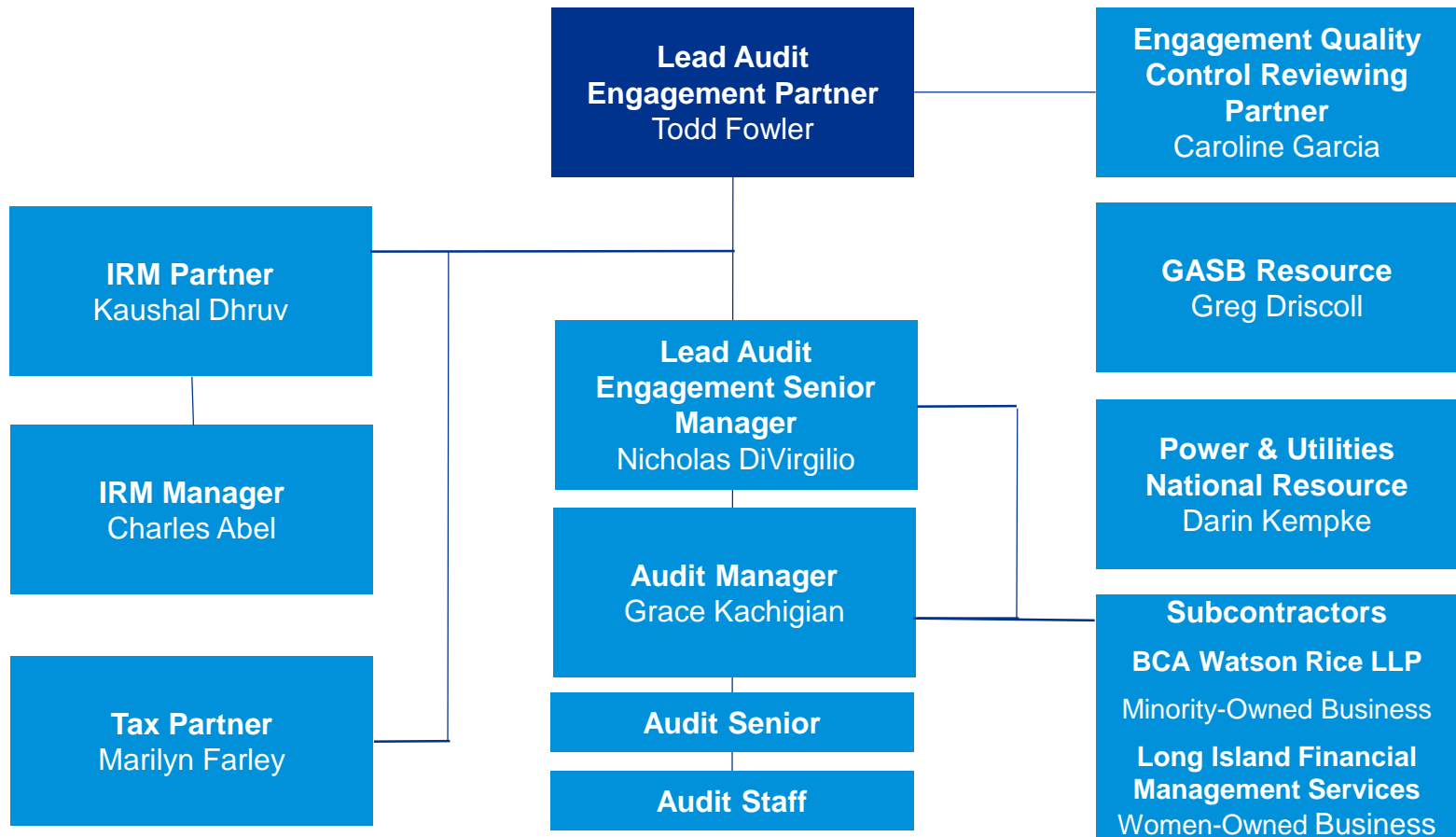
**A.5 Independence**



1.0

Client service team

# Client service team





2.0

Objective of an audit

# Objectives of an audit

- The objective of an audit of the financial statements is to enable the auditor to express an opinion about whether the financial statements that have been prepared by management with the oversight of the Audit Committee are presented fairly, in all material respects, in conformity with generally accepted accounting principles (GAAP), including Government Accounting Standards, as issued by the Government Accounting Standards Board (GASB).
- We plan and perform the audit to obtain reasonable, rather than absolute, assurance about whether the financial statements taken as a whole are free from material misstatement, whether due to fraud or error.
- We perform our audit in accordance with:
  - Auditing standards generally accepted in the United States of America as issued by the Auditing Standards Board of the American Institute of Certified Public Accountants (U.S. GAAS).
  - Government Auditing Standards issued by the Comptroller of the United States.
- Our audit includes:
  - Performing tests of the accounting records and such other procedures, as we consider necessary in the circumstances, based on our judgment, including the assessment of the risks of material misstatement, to provide a reasonable basis for our opinion.
  - Evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, and evaluating the overall presentation of the financial statements.



3.0

Risk assessment



# Risk assessment

Significant audit areas	Significant estimates	Significant unusual transactions/other items	Information technology matters
<ul style="list-style-type: none"> <li>— Revenue recognition</li> <li>— Long term debt</li> <li>— Capital assets</li> <li>— Investments (including Nuclear Decommissioning Trust)</li> </ul>	<ul style="list-style-type: none"> <li>— Asset retirement obligations</li> <li>— Derivative valuations</li> <li>— Other post-employment benefits</li> <li>— Investments (including Nuclear Decommissioning Trust)</li> </ul>	<ul style="list-style-type: none"> <li>— Implementation of new accounting pronouncements</li> <li>— Assessment of any outstanding, pending or threatened litigation</li> <li>— Canal Corp acquisition</li> <li>— Bond offering, if applicable</li> </ul>	<ul style="list-style-type: none"> <li>— General information technology environment</li> <li>— Related application controls</li> </ul>



4.0

Audit plan

# Audit plan - scope

<b>Scope of work</b>	<i>Audit of the financial statements for the New York Power Authority as of and for the two-year period ended December 31, 2016</i>
<b>Applicable financial reporting framework</b>	<i>U.S. generally accepted accounting principles (GAAP), including Government Accounting Standards, as issued by the Government Accounting Standards Board (GASB)</i>
<b>Applicable auditing standards</b>	<p><i>We perform our audit in accordance with:</i></p> <ul style="list-style-type: none"> <li><i>-Auditing standards generally accepted in the United States of America as issued by the Auditing Standards Board of the American Institute of Certified Public Accountants (U.S. GAAS)</i></li> <li><i>-Government Auditing Standards issued by the Comptroller of the United States</i></li> </ul>
<b>Other terms of engagement</b>	<p><i>Additional Reports to be issued:</i></p> <ul style="list-style-type: none"> <li><i>-Report on Internal Control Over Financial Reporting and Compliance and other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards as of December 31, 2016</i></li> <li><i>-Report on Investment Compliance as of December 31, 2016</i></li> <li><i>-Report on Compliance with Requirements That Could Have a Direct and Material Effect on Each Major Program and on Internal Control over Compliance in Accordance with the Uniform Guidance, if applicable</i></li> <li><i>-Revenue Bonds issuance consent and comfort letter, if applicable</i></li> </ul>

# Audit plan - Deliverables and time line

September – November 2016		December 2016	January – February 2017	March 2017
<ul style="list-style-type: none"> <li>— Identify financial statement fraud risks and assess the effect on the audit plan</li> <li>— Perform risk assessment procedures and identify risks</li> <li>— Assessment of audit risk and planning of substantive audit procedures</li> <li>— Determine audit strategy and identify critical accounting matters</li> <li>— Plan audit procedures</li> <li>— Finalize planned audit approach</li> </ul>	<ul style="list-style-type: none"> <li>— Perform walkthroughs of internal control processes</li> <li>— Test entity-wide and monitoring controls</li> <li>— Evaluate design of selected key controls</li> <li>— Test IT general controls</li> <li>— Test operating effectiveness of selected key controls</li> <li>— Perform interim substantive procedures</li> <li>— Evaluation of interim results and establish plan for performance of substantive audit procedures</li> </ul>	<ul style="list-style-type: none"> <li>— Present 2016 Audit Plan to the Audit Committee</li> <li>— Perform/send year-end confirmations (e.g. legal, debt, cash, investments, accounts receivable, revenue and derivatives)</li> <li>— Inventory observation attendance</li> </ul>	<ul style="list-style-type: none"> <li>— Meetings with management to discuss key issues</li> <li>— Test operating effectiveness of selected year-end controls</li> <li>— Perform substantive procedures and tests of detail</li> <li>— Perform procedures related to the Authority's investment compliance with the State of New York guidelines</li> <li>— Consider if audit evidence is sufficient and appropriate</li> <li>— Conclude on critical accounting matters and issues</li> </ul>	<ul style="list-style-type: none"> <li>— Confirm completion procedures</li> <li>— Form audit conclusions</li> <li>— Perform overall evaluation of financial statements and disclosures</li> <li>— Present required communications to Audit Committee</li> <li>— Form audit opinion on financial statements</li> <li>— Report on Internal Control over Financial Reporting and Compliance on Other Matters</li> <li>— Report on Investment Compliance</li> <li>— Finalize all deliverables</li> <li>— Prepare management letter comments, if applicable</li> </ul>

# Audit plan - Involvement of others

## Financial statement audit

### — Internal Audit

**KPMG will work with the Authority's Internal Audit function to perform a more efficient audit. Throughout our audit we will regularly meet with Jen Sutton to discuss:**

- The status of the internal audit reports
- Findings made by internal audit and determine the impact to our audit
- Reports we can leverage as part of our audit
- Findings made by KPMG which could have an impact on internal audit's reports
- Best practices observed by KPMG

# Audit plan - Involvement of others (continued)

## Financial statement audit

### — External Experts and Service Organizations

External Expert / Service Organization	Financial Statement Account	Description of Work
— Swap Financial Group	— Risk management activities - derivatives	— Determine the fair value and hedge effectiveness of interest rate swaps
— PA Consulting Group	— Risk management activities – derivatives	— Determine the fair value of commodity swaps
— Buck Consulting	— Other postemployment benefit obligation/asset	— Actuarial report for the Authority's GASB 45 Other Postemployment Benefits
— J.P. Morgan	— Investment in securities	— Custodian for the Authority's investment portfolio
— Ceridian	— Payroll expense	— Payroll services for the Authority
— New York ISO	— Revenue and accounts receivable	— Billing and settlement services related to the purchase and sale of power in New York



5.0

KPMG's Audit  
Committee Institute  
and Global Energy  
Institute

## KPMG's Audit Committee Institute (ACI)

In depth insights. In time to matter.

### ACI Programs

- KPMG/NACD Quarterly Audit Committee Webcast
  - September 29, 2016 (Replay available)
  - January 26, 2017
- 13<sup>th</sup> Annual Audit Committee Issues Conference
  - January 9 – 10, 2017
  - Boca Raton, FL
- Audit Committee Peer Exchanges
- Directors Roundtable Series (spring 2017)
- Audit Forum – Preconference to the NACD Global Board Leaders' Summit

### Suggested Publications (available for download at [www.kpmg.com/aci](http://www.kpmg.com/aci))

- Directors Quarterly Audit October 2016
- Q2 2016 Focus: Financial Reporting and Auditing Update
- Financial Reporting Risk Today: Hot Spots and Heightened Scrutiny

### Resources

- Audit Committee Insights – U.S. and International editions (biweekly electronic publications): [www.kpmginsights.com](http://www.kpmginsights.com)
- ACI Web site: [www.kpmg.com/aci](http://www.kpmg.com/aci)
- ACI mailbox: [auditcommittee@kpmg.com](mailto:auditcommittee@kpmg.com)
- ACI hotline: [1-877-KPMG-ACI](tel:1-877-KPMG-ACI)





# KPMG's Global Energy Institute

## Recent Webcast

- Key Tax Developments Affecting the Power and Utilities Industry

## Recent Publications

- 2016 KPMG CEO Survey Infographic (see next slide)
- 2016 Global Energy Conference Recap
- 2016 KPMG Energy Outlook Survey Results
- Plugged In: A Deeper Look into Power and Utilities
- Plugged In: Trends in the Energy Industry
- KPMG Corporate Finance: Energy Investment Banking (Q2 2016)

## Resources

- [KPMG Institute Website](#)
- [Global Energy Institute Website](#)



# 2016 KPMG CEO Outlook: Utilities Industry

## Growth

New markets & customers are the most important sources of growth

**87%** indicate growth opportunities are abundant

**50%** believe the industry is in a peak growth phase

## Cyber

Minimizing cyber security risk is viewed as a top strategic priority over the next three years

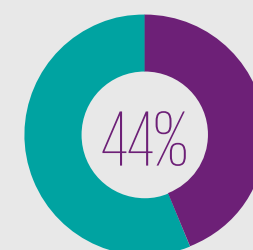
**1 in 10** utility CEOs say they are fully prepared for a cyber event



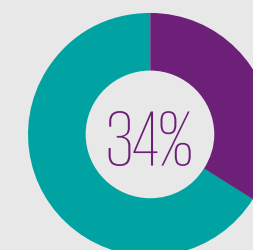
**85%** say their organization is somewhat prepared for a cyber event

## Regulatory

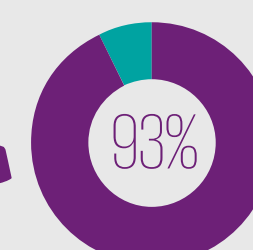
Regulatory risk cited as most concerning to Utility CEOs



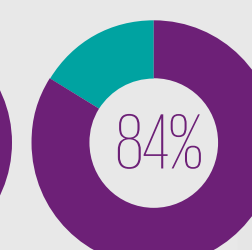
Utility CEOs



Other Industries



Utility CEOs



Other Industries

Utility CEOs more concerned than other industry CEOs that regulations will inhibit growth

## Innovation & Analytics

Innovation is one of the top three issues on the personal agenda of Utility CEOs

**54%** describe their organization's approach to innovation as accelerated

The top 2 uses of Data & Analytics are to improve financial reporting and manage risk

Utility CEOs say their organizations use disruptive technologies most often to improve product/service offerings

**73%** vs. **63%** Other Industries

TOP 3

areas to driving innovations

Connecting in a beneficial way with university and/or other research institutes

Specifically including innovation in business strategy with clear targets and objectives

Having a formal process to generate/source ideas





# Appendices



A.1

# Responsibilities

# Responsibilities

## **Management is responsible for:**

- Adopting sound accounting policies
- Fairly presenting the financial statements, including disclosures, in conformity with GAAP
- Establishing and maintaining effective internal control over financial reporting (ICFR), including programs and controls to prevent, deter, and detect fraud
- Identifying and ensuring that the Authority complies with laws and regulations applicable to its activities, and for informing the auditor of any known material violations of such laws and regulations
- Making all financial records and related information available to the auditor
- Providing unrestricted access to personnel within the entity from whom the auditor determines it necessary to obtain audit evidence
- Adjusting the financial statements to correct material misstatements
- Providing the auditor with a letter confirming certain representations made during the audit that includes, but is not limited to, management's:
  - Disclosure of all significant deficiencies, including material weaknesses, in the design or operation of internal controls that could adversely affect the Authority's financial reporting
  - Acknowledgement of their responsibility for the design and implementation of programs and controls to prevent, deter, and detect fraud
  - Affirmation that the effects of any uncorrected misstatements aggregated by the auditor are immaterial, both individually and in the aggregate, to the financial statements taken as a whole

# Responsibilities (continued)

## **The Audit Committee is responsible for:**

- Oversight of the financial reporting process
- Oversight of the establishment and maintenance by management of programs and internal controls designed to prevent, deter, and detect fraud

## **Management and the Audit Committee are responsible for:**

- Setting the proper tone and creating and maintaining a culture of honesty and high ethical standards

**The audit of the financial statements does not relieve management or the Audit Committee of their responsibilities.**

# Responsibilities (continued)

## **KPMG is responsible for:**

- Forming and expressing an opinion about whether the financial statements that have been prepared by management, with the oversight of the Audit Committee, are presented fairly, in all material respects, in conformity with GAAP.
- Planning and performing our audit with an attitude of professional skepticism to obtain reasonable—not absolute—assurance about whether the financial statements are free of material misstatement, whether caused by fraud or error. Because of the nature of audit evidence and the characteristics of fraud, we are able to obtain reasonable, but not absolute, assurance that material misstatements will be detected. Our audit is not designed to detect error or fraud that is immaterial to the financial statements.
- Conducting the audit in accordance with professional standards and complying with the Code of Professional Conduct of the American Institute of Certified Public Accountants, and the ethical standards of relevant CPA societies and relevant state boards of accountancy.
- Evaluating ICFR as a basis for designing audit procedures, but not for the purpose of expressing an opinion on the effectiveness of the entity's ICFR.
- Communicating to management and the Audit Committee all required information, including significant matters.
- Communicating to management and the Audit Committee in writing all significant deficiencies and material weaknesses in internal control identified during the audit and reporting to management all deficiencies noted during our audit that are of sufficient importance to merit management's attention. The objective of our audit of the financial statements is not to report on the Authority's internal control and we are not obligated to search for material weaknesses or significant deficiencies as part of our audit of the financial statements.

# Responsibilities for other information in documents containing audited financial statements

- The auditors' report on the financial statements does not extend to other information in documents containing the audited financial statements, excluding required supplementary information..
- We are required to:
  - Read the other information to identify material inconsistencies with the audited financial statements or material misstatements of fact, and
  - Make appropriate arrangements with management or the Audit Committee to obtain the other information prior to the report release date.
- Any material inconsistencies or misstatements of fact that are not resolved prior to the report release date, and that require revision of the other information, may result in KPMG modifying or withholding the auditors' report or withdrawing from the engagement.





A.2

KPMG's audit  
approach and  
methodology

# KPMG's audit approach and methodology

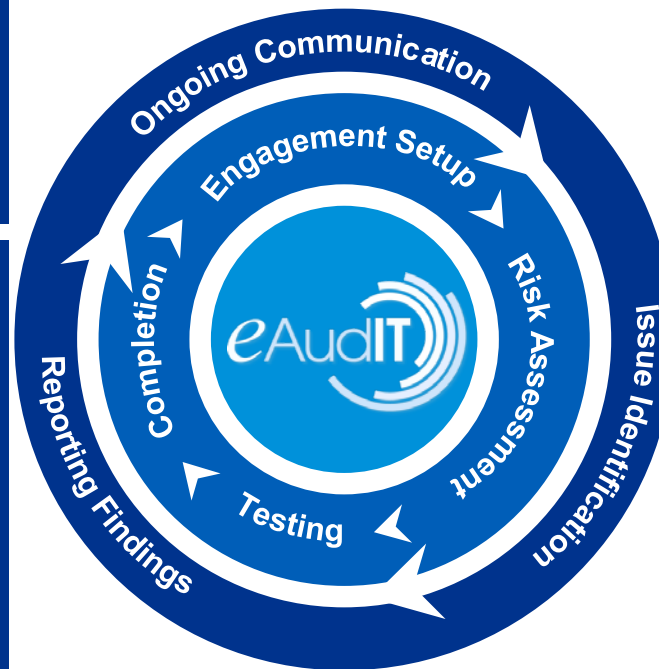
## Technology enabled audit work flow

### Engagement Setup

- Tailor the eAudit work flow to your circumstances
- Access global knowledge specific to your industry
- Team selection and timetable

### Completion

- Update risk assessment
- Perform overall evaluation of results and the financial statements
- Form and issue audit opinion on the financial statements
- Obtain written representations from management
- Required Audit Committee communications
- Debrief audit process



### Risk Assessment

- Understand your business and financial processes
- Identify significant risks
- Plan involvement of specialists and others including experts, internal auditors, service organizations, and other auditors
- Determine audit approach
- Evaluate design and implementation of your internal controls

### Testing

- Test effectiveness of internal controls, as applicable
- Perform substantive tests



A.3

Materiality

# Audit plan - Materiality

- Professional standards require that we exercise professional judgment when we consider materiality and its relationship with audit risk when determining the nature, timing, and extent of our audit procedures, and when evaluating the effect of misstatements.
- Information is material if its misstatement or omission could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.
- Judgments about materiality are made in light of surrounding circumstances and are affected by the size or nature of a misstatement, or a combination of both.
- Judgments about matters that are material to users of the financial statements are based on a consideration of the common financial information needs of users as a group. The possible effect of misstatements on specific individual users, whose needs may vary widely, is not considered.



A.4

Audit fees

# Audit fees

	2016 Estimated	2015 Actual
Audit fees		
Financial statements and related notes to the financial statements		
Report on Internal Control Over Financial Reporting and Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Accounting Standards</i>	\$297,000	\$288,000
Investment Compliance Report		
<b>Total fees</b>	<b>\$297,000</b>	<b>\$288,000</b>

\* 2016 fees will be based on the actual number of hours incurred at the applicable hourly rates set out in our agreement. The represents the amount not to exceed for the 2016 audit.



A.5

Independence

# KPMG independence quality controls

## **KPMG maintains a comprehensive system of quality controls designed to maintain our independence**

- Pre-approval of all worldwide engagements by the audit engagement team through Sentinel, a KPMG independence verification system
- Monitoring employment relationships
- Tracking partner rotation requirements using PRS, the firm's automated partner rotation tracking system
- Automated investment tracking system used by all KPMG member firms (KICS)
- Training and awareness programs
- Compliance testing programs
- Annual reporting to the Audit Committee

**In our professional judgment, we are independent with respect to the New York Power Authority, as that term is defined by the professional standards.**







[kpmg.com/socialmedia](https://kpmg.com/socialmedia)

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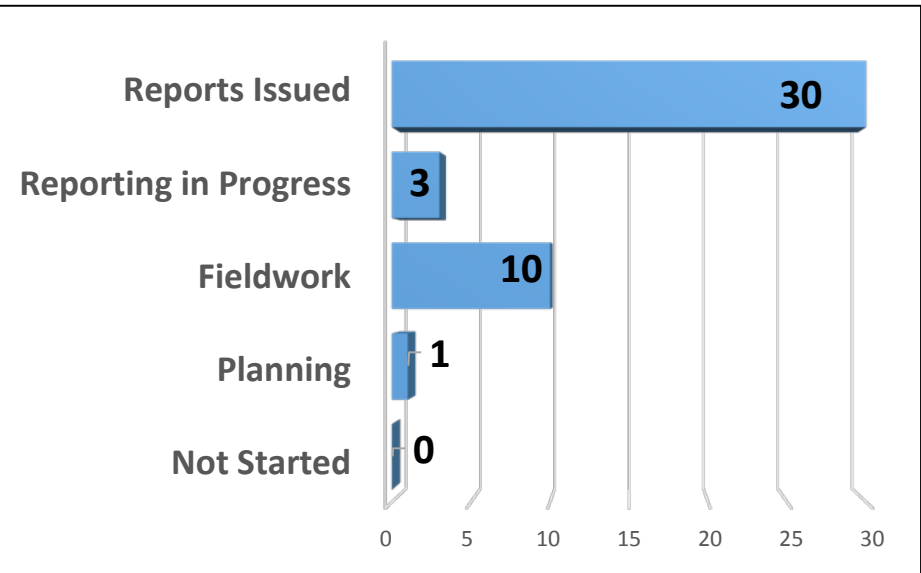
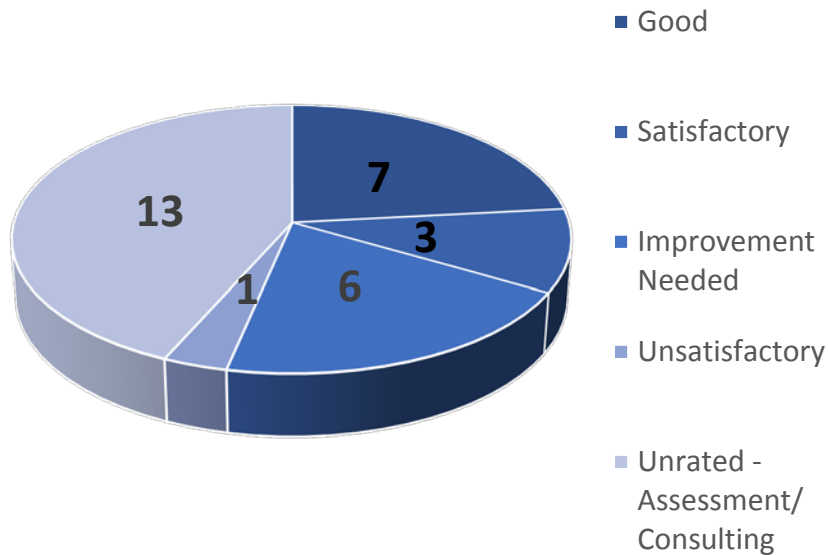
**NY Power  
Authority**

***Audit Committee Update  
Internal Audit Activity Report***

# 2016 Status Update

# 2016 Audit

- 2016 Plan Status:
  - Thirty of 44 audits have been issued as of 11/28/16.
  - Fieldwork for the remaining 14 audits will be complete by 12/16/16 and reports are expected to be issued by the end of December.
  - No significant risks have been identified on unissued reports at this time.



# 2016 Key Accomplishments

## People

- Continued onboarding and acclimation of new team members
- Conducted business acumen, soft skills and developmental trainings for the dept including a team tour of the SENY facility
- Started succession and development planning
- Guest Auditor launched with 5 colleagues participating in 3 audits
- Execution of several team building activities including a group community service event
- Obtained NASBA certification to issue CPE

## Process

- Methodology improvements and efficiencies designed. Planned roll out January 2017
- Introduced fraud considerations to audit programs
- Launched Audit Liaison Program to pair IA team members with EMC-1
- Created formal performance management program for audits
- Execution of over 20 informal Consulting activities

## Technology

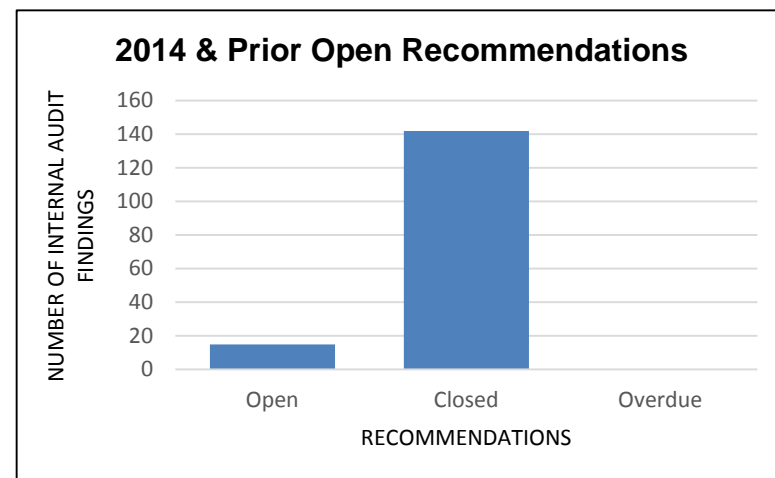
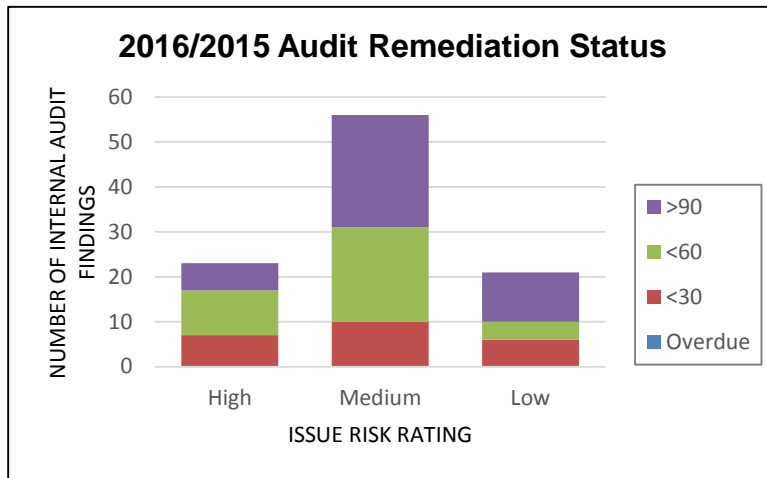
- Successfully transition third party co-source partner
- Hired IA Technology Director
- Designed go forward model to build out IA Technology group
- Co-leading project with other risk management units to design risk and control framework which will lead to GRC selection
- Design SharePoint site to track and monitor remediation. Planned rollout 2017

# Appendix

# Status of Audit Recommendations

- Below is the status of the 2016 and 2015 recommendations per rating of the individual findings.
- IA is comfortable with the status of open remediation.

2016-2015 Remediation	Total	High	Medium	Low
Remediation In Progress (IP)	138	61	56	21
IP - Overdue	0	0	0	0
IP – Due within <30 days	23	7	10	6
IP – Due within <60 days	31	6	21	4
IP – Due within >90 days	84	48	25	11
Remediation not Started	0	0	0	0



\*As ratings have been established for 2015 reports onwards, recommendations prior to 2015 do not include risk ranking for recommendations.



**NY Power  
Authority**

***Audit Committee Update  
2017 NYPA Internal Audit Plan***



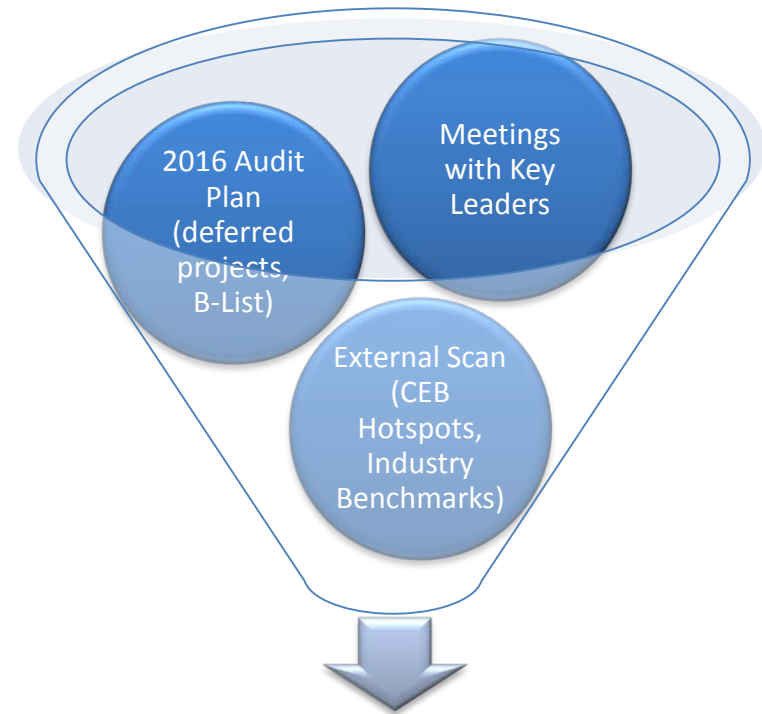
# Executive Summary

## Annual Planning Goal

**Define a 2017 Audit Plan that reflects on the following:**

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

## Process Inputs

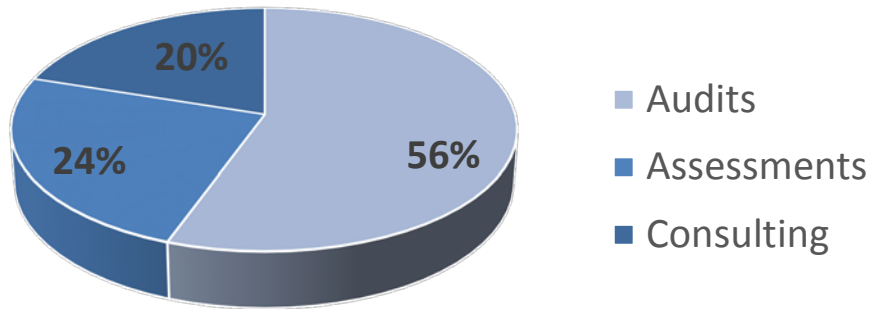


**EMC Review & Audit Committee Approval**

# Proposed 2017 Plan - Coverage

## 2017 Planned Activities

45 projects in the Proposed 2017 Audit Plan



## 2017 vs 2016

Planned activities:

	2017 Plan	2016 Actual
Assessments	11	10
Audits	25	29
Consulting	9	5
<b>Total</b>	<b>45</b>	<b>44</b>

## Activity Definitions

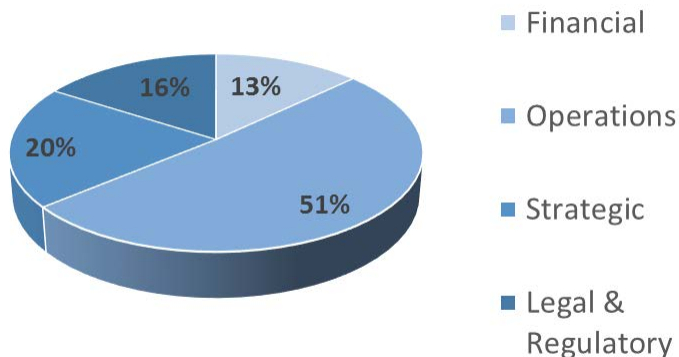
- **Audit:** A look back - independent assessment of the performance of NYPA's risk management, control, and governance processes
- **Assessment:** A look forward - advisory assessment, focused on process improvement opportunities, risk identification and mitigation within new processes or initiatives
- **Consulting:** Ongoing - consulting and partnering arrangements that result in documented feedback or real time verbal feedback.

## Proposed 2017 Plan - Allocation

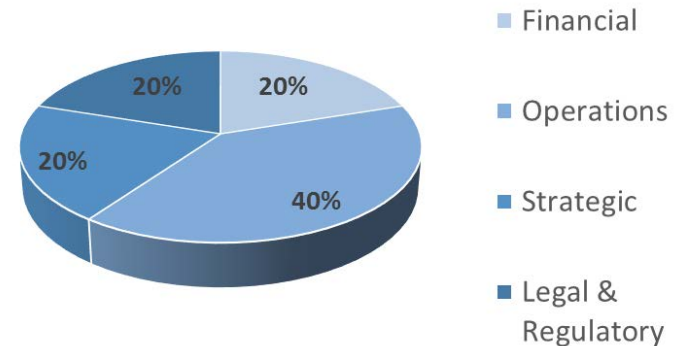
**Resource Allocation: 45 projects are included based on resource availability**

Resource Allocation	Business	Technology
Actual Resource hours available	16,400	2,100
Budgeted Third Party hours available	200	4,200
<i>Proposed 2017 Audit Plan Hours</i>	16,600	6,300

### 2017 Planned Allocation



### Goal Allocation



Difference between 2017 Planned Allocation and Goal Allocation is due to the volume of strategic initiatives and significant projects in the Utility Operations Business Unit.

# Proposed 2017 Plan – Changes for 2017

Key Changes	Discussion
Build NYPA IA Technology Capabilities	<ul style="list-style-type: none"> <li>- In 2016, hired experienced Technology Director responsible for execution of the 2016 Plan through Deloitte co-source partnership.</li> <li>- Two positions are posted and are in recruitment.</li> <li>- Requested three (3) additional headcount in 2017 budget to hire internal resources which will lead to reduced reliance on and cost of co-sourced partner.</li> </ul> <p>Benefits will include:</p> <ul style="list-style-type: none"> <li>- Enhanced relationship and knowledge management</li> <li>- Improve coverage over general technology controls</li> <li>- Increased ability to provide technology consulting</li> <li>- Build strong technology skills within NYPA</li> </ul>
Integrated Audits	<ul style="list-style-type: none"> <li>- 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.</li> </ul>
Support Financial Acumen & Cost Savings Initiatives	<ul style="list-style-type: none"> <li>- Examples of proposed 2017 Audits to reinforce NYPA’s financial acumen emphasis include Cost Allocations, Financial Performance Metrics, and Generator Variable Costs.</li> <li>- Examples of proposed 2017 Audits to support management’s assessment of potential cost cutting include Telecom Cost Recovery Project and Third Party Contract Audits.</li> </ul>

# Key Initiatives for 2017

---

## Audit Methodology

- Continue refining & improving methodology to drive consistency in audit execution

## Key Performance Metrics for Audit Activities

- Define key metrics & goals for audit activities

## GRC Tool

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

## Data Analytics

- Identify strategy for IA data analytics for full implementation in 2018 with pilots in Q3/Q4

## Staff Development Plans/Succession Planning

- Develop succession plans and development plans for each team member

# Recommendation

---

*IA recommends that the Audit Committee approve the 2017 NYPA Internal Audit Plan.*

# Appendix A - Proposed 2017 Audit Plan

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
1	Enterprise Portfolio Management Design Assessment	Assessment	Entity-Wide	Lack of alignment of various functional areas working to establish Portfolio Management solutions could lead to inefficiencies and excessive costs to NYPA.	Evaluate portfolio management functions in existence or being developed across NYPA to improve prioritization and management of the broad range of nonrecurring projects to confirm common vision, framework and alignment of outcomes. Ensure 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	Q3
2	Cyber Security Roadmap Consulting Support	Consulting	Technology	Failure to properly implement the workstreams of the cyber security roadmap will not elevate NYPA's security posture and lead to potential cyber security events.	Review the progress of roadmap workstreams in accordance with their timeline for the cyber security roadmap rollout. Determine if the rollout for each workstream is meeting its objectives, milestones and proper controls have been incorporated and documented. Audit coverage for NERC CIP Audit Prep Support and Cloud Security are covered under separate engagements as continuations from 2016.	Operations	High	Ongoing
3	SAP Basis Administration	Audit	Technology	Lack of proper configuration for SAP Basis can lead to 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
4	Cyber Security Services Function Design Support	Consulting	Technology	Poorly designed organizational structure, processes and procedures for the Cyber Security Engineering & Architecture, Operations, Governance & Strategy and Compliance Operations functions can lead to non-compliance with regulations, decrease the success of the rollout and NYPA's security posture.	Cyber security function development in progress in 2016 and will be rolled out in 2017. Evaluate the organizational structure and function of Engineering & Architecture, Operations, Governance & Strategy and Compliance Operations to ensure proper controls have been incorporated.	Operations	High	Q2
5	Transmission Cost of Service	Audit	Entity-Wide	Lack of repeatable process for filing Transmission Cost of Service could lead to the inefficient use of resources and unrecovered costs.	Assess the validity and accuracy of cost of service data inputs to ensure accuracy and completeness of costs used to develop the cost of service. Evaluate the adequacy and effectiveness of controls established to both prepare and file the annual transmission cost of service to ensure sustainable and that controls exist to ensure accuracy and completeness of rate case filings.	Operations	High	Q2



# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
6	Hydro Forecast Process	Audit	Operations	Inaccurate hydro volume forecasts lead to suboptimal resource allocation decisions.	Evaluate controls over the hydro forecasting process to ensure forecasting best practices are being followed, forecast inputs are complete and accurate, and transparency in the assumptions and judgments used.	Operations	High	Q1
7	HTP Operations	Audit	Commercial Operations & Energy Solutions	Lack of transparency or understanding by NYPA in costs to operate and maintain the line leading to unexpected or increasing operating losses. Poor vendor performance leading to suboptimal line utilization and financial results.	Ensure controls in place to manage the operations and maintenance of the HTP line are adequate and working effectively. This audit will include evaluating NYPA's controls to oversee compliance with the terms and conditions in the third party vendor contract with ConEd Solutions: - compliance with policies and procedures - oversight of line operations vendor (ConEd Solutions) - transparency in performance to assist management in long-term decision-making - all costs are accurately budgeted and consistent with contract terms	Financial	High	Q1
8	Resource Loaded Scheduling	Assessment	Operations	Lack of credible information to support resource utilization and needs could lead to suboptimal resource allocation decisions.	Verify the accuracy and completeness of resource loaded schedules being developed within Operations to support the results as a credible source for future resource allocation decisions.	Strategic	High	Q4
9	Ariba System Implementation - Contract Lifecycle Management Module	Audit	Technology	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 pre/post implementation activities to ensure the Ariba Contract Lifecycle Management module has proper business requirements, system configuration, interfaces, systems and user acceptance testing, system security and overall project management. In addition, provide support for the development of contract management processes to ensure effective controls are incorporated. In addition, the audit will include post implementation audit activities to determine if project objectives were met, user satisfaction, additional changes made after go live and system performance.	Operations	High	Ongoing
10	Generator Variable Costs	Assessment	Entity-Wide	Inaccurate or incomplete generator variable cost data could lead to generator's not being optimally positioned in the market.	Verify the accuracy and completeness of variable costs for NYPA's generating assets and confirm actual variable costs exist at the NYISO as required in the NYISO's Reference Level Manual to optimally position the assets.	Financial	High	Q1
11	Deferred Asset Accounting	Audit	Business Services	Unreconciled suspense accounts could lead to aging of receivables or other potentially accounting entries that are not written off in a timely manner.	Review deferred asset accounts used as suspense to hold customer or other receivables to confirm reconciliation and that aged items are identified, escalated and resolved.	Financial	High	Q2

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
12	New York Energy Manager	Audit	Commercial Operations & Energy Solutions	Strategic investment does not yield desired results leading to negative impact to NYPA'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	Q2
13	Employee Data Protection	Audit	HR & Enterprise Shared Services	Lack of proper controls in place to ensure sensitive employee data such as SS#, date of birth etc. has not been disclosed can lead to employee identity theft and reputational damage to NYPA.	Evaluate the controls governing employee data to ensure Personally Identifiable Information (PII) and Protected Health Information (PHI) is protected from compromise in accordance with NYPA's policies and procedures and industry regulations such HIPAA, US Privacy Act, Identity Theft Prevention Act and other regulations.	Legal and Regulatory	High	Q3
14	Success Factors System Implementation	Audit	Entity-Wide	Ineffective project management and system development lifecycle controls can lead to project delays, cost overruns and poor system performance. In addition, IT will not effectively assist the business in meetings its strategic objectives.	Review pre/post implementation activities to ensure the Success Factors modules have proper business requirements, system configuration, interfaces, systems and user acceptance testing, system security and overall project management.	Operations	High	Ongoing
15	Operating System Security	Audit	Technology	Failure to have effective security, configuration, monitoring and standardized procedures for Windows, UNIX and Linux operating systems can lead to unauthorized access, system compromise and unavailability.	Reviews the controls over the Windows, UNIX and Linux operating system environments including evaluating processes and standards for OS administration, logical access, process consistency, system monitoring, change control, continuity of operations. Also, review of configuration settings against defined policies and industry best practices. Audit coverage would be for IT and OT.	Operations	High	Q1
16	Emergency Management Governance Assessment	Assessment	Entity-Wide	Lack of alignment of various functional areas working to establish emergency management, business resiliency, business continuity, disaster recovery and incident response solutions could lead to inefficiencies and excessive costs to NYPA.	Evaluate emergency management related functions (emergency management, business resiliency, business continuity, disaster recovery and incident response) being created or reengineered across NYPA to confirm common vision, framework(s) and alignment.	Operations	High	Q2
17	Niagara SCADA Upgrade	Audit	Operations	Failure to follow configuration management procedures for the Niagara SCADA upgrade can result with the system's inability to detect operational failures, send alerts and potentially allow unauthorized access to the system.	Review pre/post implementation activities to ensure the Niagara SCADA upgrade has been properly configured in accordance with vendor specifications, factory acceptance and site tested, approved, and incorporated security measures in accordance with OT's configuration management procedures.	Operations	High	Ongoing

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
18	IT Disaster Recovery (DR)	Audit	Technology	Ineffective disaster recovery procedures can lead to unrecoverable business functions and systems in the event of a disaster.	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	Q3
19	LPGP LEM	Audit	Operations	Inefficient or ineffective project management activities could result in suboptimal use of resources and projects that do not meet objectives.	Large Construction Project Audit - ensure project risks are being identified and mitigated, project is conducted consistent with CEAR/approval, that management is aware of the project's status and that significant vendors or contractors are not overbilling NYPA and are performing in accordance with contract terms.	Operations	High	Q4
20	SDLC Roadmap Support	Consulting	Technology	Failure to not develop the SDLC roadmap can result with continued immaturity levels for system development lifecycle, project management procedures and no visibility to project quality.	Assist management with the development of the SDLC roadmap to address the recommendations made in the 2016 SDLC audit.	Operations	High	Q1
21	ISO 55000 Framework Design Support	Consulting	Operations	Lack of clear understanding and plan to comply with ISO55000 could result in the suboptimal allocation of Authority resources and the desired certification not being obtained.	Provide support to Operations as they develop a framework 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 a clear and consistent strategy for providing assurance in accordance with the standard. Internal Audit will invest in the Internal Audit team including the required training and certifications necessary to support NYPA's desired 2018 compliance date.	Strategic	High	Ongoing
22	Cost Allocations	Audit	Entity-Wide	Inaccurate cost allocations could lead to suboptimal or uninformed business decisions.	Evaluate the adequacy and effectiveness of cost allocation controls 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 judgments in the cost allocation process exist, evaluate support for judgments for reasonableness. Areas of consideration for cost allocation include but are not limited to headquarters/overhead costs as well as the allocation of costs to assets supported by shared resources such as transmission, small hydros, and in-city units.	Strategic	High	Q3

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
23	System Testing Management	Audit	Technology	Limited and undocumented system and UAT testing can result in user dissatisfaction and increased cost to fix system issues.	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.	Operations	Medium	Q2
24	Customer Credit	Assessment	Entity-Wide	Customer default could lead to unexpected or unplanned losses to NYPA.	Ensure controls in place to both extend credit to customers and manage credit instruments are designed adequately and working effectively. Assess NYPA's intention, ability and timing to allow customers to obtain credit from other funding sources as a means of reducing its customer default risk. Evaluate controls over governmental customers that are not credit assessed and determine if credit policy is being applied to riskier customers. Evaluate the support for management's judgments related to loss reserves as well as the accounting treatment of both the credit instruments and any associated losses.	Operations	High	Q2
25	2016 OSC Audit - Remediation Follow-up	Audit	Entity-Wide	Lack of execution of agreed upon remediation to OSC findings could lead to an increased OSC presence and negative public and stakeholder opinion of NYPA.	Follow-up on agreed upon OSC Audit remediation activities to ensure implementation is complete or action plans are on track to resolve in a timely manner.	Legal and Regulatory	High	Q4
26	NERC CIP Audit Prep Support	Consulting	Operations	Failure to comply with NERC CIP v5/6 requirements may result with regulatory fines/penalties and increased regulatory scrutiny.	Provide audit prep support for the NERC CIP v5/6 audit by the NPPC in December 2017. Determine if the documentation and staff knowledge are adequate for compliance with NERC CIP standards.	Legal and Regulatory	High	Ongoing
27	Transitional Position Utilization Assessment	Assessment	HR & Enterprise Shared Services	Unclear or inconsistent utilization of transitional positions could result in unmitigated resource/succession planning risks.	Assess the utilization of transitional positions as a key mitigation to NYPA's resource/succession planning risk. Ensure NYPA has clearly defined procedures for how business units are to leverage this mitigation tool as a part of their risk management effort.	Operations	High	Q3
28	AGILE Strategic Initiative	Audit	Entity-Wide	Strategic investment does not yield desired results leading to unrecovered costs and impaired reputation.	Confirm NYPA is managing its investment in AGILE in accordance with the Board of Trustee's authorization. Confirm transparency to the Trustee's in management's compliance activities.	Strategic	High	Q3
29	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 Initiative business plan is revised and implementation efforts are initiated to ensure controls being established are adequate to mitigate NYPA's operational and financial risks.	Strategic	High	Ongoing
30	Third Party Contract Audits	Audit	Entity-Wide	Third party vendor nonperformance 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 our audits rights to confirm performance in accordance with contract terms including accuracy of invoicing and contract deliverables.	Operations	High	Ongoing

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
31	Generator Meter to Cash	Audit	Entity-Wide	Inaccurate or incomplete generator metering and settlement could lead to suboptimal financial results.	Evaluate from generator meter to the collection of cash that controls are designed adequately and working as expected to ensure the accuracy of the settlement with direct and market based sales for both energy and ancillary services. Processes and related handoffs between the following groups are in scope: Metering, Generation Bidding, NYISO Settlements, Accounting, Information Technology, etc.	Operations	High	Q3
32	Physical Security Investments Assessment	Assessment	Operations	Significant physical security investments did not meet intended objectives.	Assess NYPA's actual to stated objectives in the physical security infrastructure/technology upgrades over the last two years. Ensure change management initiatives to enable end users were adequate and had the desired results.	Operations	High	Q1
33	Business Development Governance	Assessment	Entity-Wide	Lack of alignment of various functional areas working to improve NYPA's business development activities could lead to inefficiencies and excessive costs to NYPA.	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.	Strategic	High	Q3
34	Project Management Methodology Assessment	Assessment	Entity-Wide	Lack of an effective project management framework/methodology can result with incorrect or no project prioritization, allocation of funds/resources to the wrong projects, delayed implementations, cost overruns and strategic objectives not met.	Enterprise-wide assessment of project management frameworks/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.	Operations	Medium	Q4
35	IT KPI and Metric Development	Consulting	Technology	Lack of KPIs and metrics to measure IT service delivery, effectiveness and efficiency can lead to duplicative procedures, service delivery delays, increased cost and user dissatisfaction.	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.	Operations	Medium	Q1
36	Telecom Cost Recovery Project	Audit	Technology	Inadequate monitoring of complicated telecommunications bills could lead to significant overcharges.	Evaluate telecommunications charges to identify and potentially recover overbillings.	Financial	High	Q2
37	Financial Performance Metrics	Audit	Business Services	Inaccurate or incomplete data supporting new financial performance metrics could lead to uninformed management decisions.	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.	Financial	High	Q2

# Appendix A - Proposed 2017 Audit Plan

#	Proposed Project	Project Type	Business Unit	Risk	Description/Preliminary Scope	Risk Category	Risk Rating	Proposed Timing
38	Customer Contract Design Review Support	Consulting	Entity-Wide	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 being renegotiated and contracts terms are being developed to ensure adequacy of contract controls..	Legal and Regulatory	High	Ongoing
39	Enterprise Risk Mitigation/Action Plan Follow-up	Assessment	Entity-Wide	Lack of transparency in the mitigation of Top Enterprise Risks and/or unresolved action plans could lead to uninformed management decisions or the unexpected realization of significant risks.	For a sample of mitigation and action plans identified during the 2016 Enterprise Risk workshops, ensure that mitigation activities are accurately defined and working as committed to by responsible management and that action plans are complete or remain on track to resolution commitment dates.	Strategic	High	Q1
40	Muni/Coop Regulation Audit	Audit	Economic Development & Energy Efficiency	New/changing business requirements for municipal and cooperative customers could result in increased litigation, external stakeholder influence and impaired reputation to NYPA.	Ensure NYPA's regulation of full requirements and monitoring/oversight of partial requirements municipal and cooperative is adequate and effective.	Legal and Regulatory	High	Q1
41	Grants & Sponsorship Compliance	Audit	Entity-Wide	Noncompliance with company policies governing grants and sponsorships could lead to impaired reputation and sanctions by state governing bodies.	Evaluate compliance with company policy 2-16 Business Related Contributions and 11-1 Contributions and Sponsorships.	Legal and Regulatory	Medium	Q1
42	Customer Compliance Audits (D&M)	Audit	Commercial Operations & Energy Solutions	Noncompliance with Recharge NY and other power allocation program (EP, RP, etc.) legislation could lead to increased regulatory scrutiny and negative impact to NYPA's reputation.	Recurring customer audits for NYPA Marketing Department to support compliance program.	Legal and Regulatory	Medium	Ongoing
43	Post Retirement Benefits Assessment	Assessment	Business Services	Unsupported judgments used in determining post retirement benefits costs to NYPA could lead to over or underfunding of post retirement benefit accounts.	Evaluate the support for judgments made by NYPA related to post retirement benefits and ensure proper accounting treatment.	Financial	Medium	Q2
44	Marketing/Sales Culture Survey	Consulting	Commercial Operations & Energy Solutions	Lack of achievement of marketing goals and objectives due to ineffective change management.	Conduct a culture survey to evaluate how Authority personnel that are responsible for interfacing with customers understand changing expectations, the tools available to engage customers and NYPA's sales objectives.	Strategic	Medium	Q3
45	Office 365	Audit	Technology	Lack of proper security controls for cloud solutions can lead to unauthorized access to sensitive data, system compromise potentially damaging NYPA's reputation.	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.	Operations	High	Q4

# Appendix B - 2017 Risk Assessment – Projects Considered But Not Included in Plan

## Appendix B - 2017 – Projects Considered but Not Included in Plan

#	Proposed Project	Description/Preliminary Scope	Action
1	Whistleblower and Anti-Retaliation	Follow-up to 2014 Ethics & Claims Management Audit findings to confirm adequacy and effectiveness of mitigation efforts. Evaluate NYPA's compliance with CP1-7 - Anti-Retaliation Policy.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
2	Customer Data Protection	Evaluate the controls governing customer data to ensure customer data is protected from compromise in accordance with NYPA's policies and procedures and industry standards.	Commerical customers and other state agency customer data does not pose as high a risk for identity theft as employee data and can be looked at in future audits.
3	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 employee data and can be looked at in future audits.
4	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.	Some Cyber Assessments covered email security in 2015 at a high level. Cyber Security also conducts phishing exercises throughout the year. May have some coverage under the Cyber Security -Data Loss Prevention consulting engagement. Full audit will be done in future audits.
5	IT Incident and Problem Management	Evaluate the effectiveness of Incident and Problem management processes and governance activities to identify and correct (both short and long-term) problems and incidents encountered in the delivery of IT services in a timely manner. The review also includes the process for conducting root cause analysis for end user and production problems and determining incidents were appropriately promoted to change tickets.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
6	IT Production Support Management	Review the processes and procedures in place for IT to provide effective production support for its SAP and non-SAP systems. Determine if production issues are handled timely, tracked and communicated to its stakeholders to	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.



## Appendix B - 2017 – Projects Considered but Not Included in Plan

#	Proposed Project	Description/Preliminary Scope	Action
7	Network Administration	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.	Partial coverage under the Cyber Assessment Remediation Validation audit in 2016. Additional coverage will be part of the Cyber Security roadmap consulting engagement.
8	North Country Economic Development Plan Compliance	Ensure the Authority is complying with all agreed upon terms of the economic development plan.	Authority supports but does not own the Plan. Efforts to move Plan forward are underway - audit in 2018.
9	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.	Audit will provide consulting support as Marketing develop's a framework and program. Not considered significant enough investment to warrant inclusion in 2017 Audit Plan.
10	Event Management Process Assessment	Evaluate processes that exist at the Authority for planning and executing public events to ensure clarity of roles and responsibilities as well as consistency of communications.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
11	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 2017 if risk or Audit resource levels change.
12	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.	Data Loss Prevention will be reviewed as part of the Cyber Security Roadmap consulting engagement.

## Appendix B - 2017 – Projects Considered but Not Included in Plan

#	Proposed Project	Description/Preliminary Scope	Action
13	Energy Information Administration Report 923 Compliance	Ensure accuracy and completeness of the Authority's EIA 923 report. Evaluate the adequacy and effectiveness of compliance reporting controls.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
14	Manual Check Processing	Ensure the adequate and effective handling of checks received by the Authority.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change or combine as part of broader Treasury Audit in 2018.
15	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 2017 if risk or Audit resource levels change.
16	Virtualized Computing	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.	Audit coverage in 2014 for Infrastructure Virtualization.
17	Community Settlements	Evaluate the adequacy and effectiveness of controls in place to ensure financial payments and other negotiated settlements are being met by the Authority in accordance with agreement terms. Confirm the accuracy and completeness of financial payments and ensure appropriate accounting treatment.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
18	Cost of Service and Rate Model Design Support	Provide support to Business Services as they update both cost of service and rate models to ensure spreadsheet controls are adequately designed.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.

## Appendix B - 2017 – Projects Considered but Not Included in Plan

#	Proposed Project	Description/Preliminary Scope	Action
19	Lease Accounting Assessment	Evaluate management's assessment of NYPA's portfolio of leases including any key metrics (such as leverage ratios) used in determining classification of leases affected by the new accounting standards. In addition assess mitigation for potential impact on banking covenants and other debt instruments resulting from any revised metrics.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
20	Wheeling Expense	Evaluate the adequacy and effectiveness of controls to ensure the accuracy of wheeling charges and the proper allocation of costs to customers.	Medium risk activity. Consider in 2017 if risk or Audit resource levels change.
21	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 2017 if risk or Audit resource levels change.
22	Remote Access	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.	Last audited by EY. To be audited in 2018.
23	Energy Commodity Risk Solution Implementation Support	IA to be embedded in the proposed project to implement an energy commodity risk management tool at NYPA to resolve gaps between current and future state strategies.	Scope and timing remain in development as of audit plan development date. Will move to 2017 Plan if/when project scope is finalized.
24	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.	Medium risk activity. Remediation activities expected to be completed by 4Q17. Follow-up will be a 2018 project.

# 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 with the greatest Canals integration impact:

Area	Project
Operations	<ul style="list-style-type: none"> <li>• SAP Basis Administration</li> <li>• Hydro Forecast Process</li> <li>• Operating System Security</li> <li>• SDLC Roadmap Support</li> <li>• Physical Security Investments Assessment</li> <li>• IT KPI and Metric Development</li> </ul>
Strategy	<ul style="list-style-type: none"> <li>• Enterprise Risk Mitigation/Action Plan Follow-up</li> </ul>
Financial	<ul style="list-style-type: none"> <li>• Generator Variable Costs</li> <li>• HTP Operations</li> </ul>
Legal and Regulatory	<ul style="list-style-type: none"> <li>• Muni/Coop Regulation Audit</li> <li>• Grants &amp; Sponsorships Compliance</li> </ul>

## Appendix C – Plan Alignment to Strategic Initiatives

Strategic Initiative	Projects
AGILE Labs	<ul style="list-style-type: none"> <li>AGILE Strategic Initiative</li> </ul>
Asset Management	<ul style="list-style-type: none"> <li>ISO 55000 Framework Design Support</li> <li>Physical Security Investments Assessment</li> <li>LPGP LEM</li> </ul>
Customer Energy Solutions	<ul style="list-style-type: none"> <li>Customer Credit</li> <li>Customer Energy Solutions Redesign Support</li> </ul>
Knowledge Management	<ul style="list-style-type: none"> <li>None</li> </ul>
New York Energy Manager	<ul style="list-style-type: none"> <li>New York Energy Manager</li> </ul>
Process Excellence	<ul style="list-style-type: none"> <li>Enterprise Portfolio Management Design Assessment</li> <li>Ariba System Implementation – Contract Lifecycle Management Module</li> <li>Emergency Management Governance Assessment</li> <li>Business Development Governance</li> <li>Project Management Methodology Assessment</li> <li>IT KPI and Metric Development</li> </ul>
Smart G&T	<ul style="list-style-type: none"> <li>None</li> </ul>
Workforce Development Center	<ul style="list-style-type: none"> <li>None</li> </ul>
Workforce Planning	<ul style="list-style-type: none"> <li>Resource Loaded Scheduling</li> <li>Success Factors System Implementation</li> </ul>

## Appendix C - Plan Alignment to Top Enterprise Risks

Top Enterprise Risk	Projects
Attract and Sustain Qualified Workforce	<ul style="list-style-type: none"> <li>• Success Factors System Implementation</li> <li>• Transitional Position Utilization Assessment</li> <li>• Resource Loaded Scheduling</li> </ul>
Catastrophic Events	<ul style="list-style-type: none"> <li>• Emergency Management Governance Assessment</li> <li>• IT Disaster Recovery (DR)</li> </ul>
Critical Infrastructure Failure	<ul style="list-style-type: none"> <li>• LPGP LEM</li> <li>• ISO 55000 Framework Design Support</li> <li>• Physical Security Investments Assessment</li> </ul>
Customer Energy Choices	<ul style="list-style-type: none"> <li>• New York Energy Manager</li> <li>• Customer Credit</li> <li>• Customer Energy Solutions Redesign Support</li> <li>• Customer Compliance Audits (D&amp;M)</li> <li>• Marketing/Sales Culture Survey</li> </ul>

## Appendix C - Plan Alignment to Top Enterprise Risks (cont.)

Top Enterprise Risk	Projects
Cyber Security	<ul style="list-style-type: none"> <li>• Cyber Security Roadmap Consulting Support</li> <li>• SAP Basis Administration</li> <li>• Cyber Security Services Function Design Support</li> <li>• Operating System Security</li> <li>• Niagara SCADA Upgrade</li> <li>• Office 365</li> </ul>
Disruptive Innovation	<ul style="list-style-type: none"> <li>• AGILE Labs</li> </ul>
Hydro Flow Volumes	<ul style="list-style-type: none"> <li>• Hydro Forecast Process</li> </ul>
Regulatory/Legislative Environment	<ul style="list-style-type: none"> <li>• Employee Data Protection</li> <li>• NERC CIP Audit Prep Support</li> <li>• Muni/Coop Regulation Audit</li> </ul>
Reputation	<ul style="list-style-type: none"> <li>• 2016 OSC Audit Remediation Follow-up</li> <li>• Grants &amp; Sponsorship Compliance</li> </ul>
Sustained Lower Power Prices	<ul style="list-style-type: none"> <li>• Generator Variable Costs</li> </ul>



## Appendix C - Plan Alignment to NYPA Financial Strategy

Financial Strategy	Projects
Financial Acumen	<ul style="list-style-type: none"> <li>• Cost Allocations</li> <li>• Enterprise Portfolio Management Design Assessment</li> <li>• Financial Performance Metrics</li> <li>• Generator Meter to Cash</li> <li>• Generator Variable Costs</li> <li>• HTP Operations</li> <li>• LPGP LEM</li> <li>• Transmission Cost of Service</li> </ul>
Potential Cost Savings Initiatives	<ul style="list-style-type: none"> <li>• Emergency Management Governance Assessment</li> <li>• ISO 55000 Framework Design Support</li> <li>• Telecom Cost Recovery Project</li> <li>• Third Party Contract Audits</li> </ul>

## Appendix C - Plan Internal Resource Allocation

	# of Days	# of Hours
Total Available Time	4,990	37,425
Non-Audit Time		
- Training/Professional Development	(388)	(2,910)
- Vacation/Sick/Holidays	(817)	(6,128)
- Administrative (includes vacancy factor)	<u>(665)</u>	<u>(4,987)</u>
Total – Non-Production Time	<u>(1,870)</u>	<u>(14,025)</u>
Continuous Improvement (reinvest in IA processes)	(289)	(2,168)
Available Resource Time	<u>2,831</u>	<u>21,233</u>
Consulting Hours	(212)	(1,590)
Hours Available for Audit Plan	2,619	19,642*

\* Includes Manager and Director time

**Internal Audit**



**NY Power  
Authority**

# ***Audit Committee Update 2017 Internal Audit Budget***

## Proposed 2017 IA Budget

	2017 Budget	2016 Budget	Explanation
Payroll* & Benefits	\$3,329,000	\$2,565,400	Increase reflects first full year of FTE Costs and filling open positions.
Training & Professional Fees	\$124,900	\$83,300	60 hours professional development per team member – reflects IIA best practice. Added Corporate Executive Board Audit Leadership Council membership in 2017.
Travel Expenses	\$39,400	\$38,800	Increase to reflect actual 2016 experience.
Consulting:			Co-Source reduction offset by increase in internal head count.
- Co-Source Partner*	\$1,100,000	\$1,500,000	GRC Tool support reflects commitment to internal efficiencies working with other risk management units.
- Compliance Audits	\$100,000	\$110,000	
- GRC Tool Support	\$150,000	\$20,000	
Miscellaneous Office	\$12,000	\$11,000	
<b>Total</b>	<b>\$4,855,300</b>	<b>\$4,328,500</b>	

\* Internal Audit's Proposed 2017 Budget includes the addition of three FTE to fill out the technology audit team. When approved, the payroll and co-source partner expense line items will change to reflect this reallocation of cost. The overall budget will not increase and will remain substantially unchanged.

# Recommendation

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*IA recommends that the Audit Committee approve the 2017 Internal Audit Budget.*



# New York Power Authority Audit plan December 31, 2016

**This presentation to the Audit Committee is intended solely for the information and use of the Audit Committee and management and is not intended to be and should not be used by anyone other than these specified parties. This presentation is not intended for general use, circulation or publication and should not be published, circulated, reproduced or used for any purpose without our prior written permission in each specific instance.**

December 15, 2016

# Agenda

**1.0 Client Service Team**

**2.0 Objective of an audit**

**3.0 Risk Assessment**

**4.0 Audit Plan**

**5.0 KPMG's Audit Committee Institute and Global Energy Institute**

## **Appendices**

**A.1 Responsibilities**

**A.2 KPMG's audit approach and methodology**

**A.3 Materiality**

**A.5 Audit Fees**

**A.5 Independence**

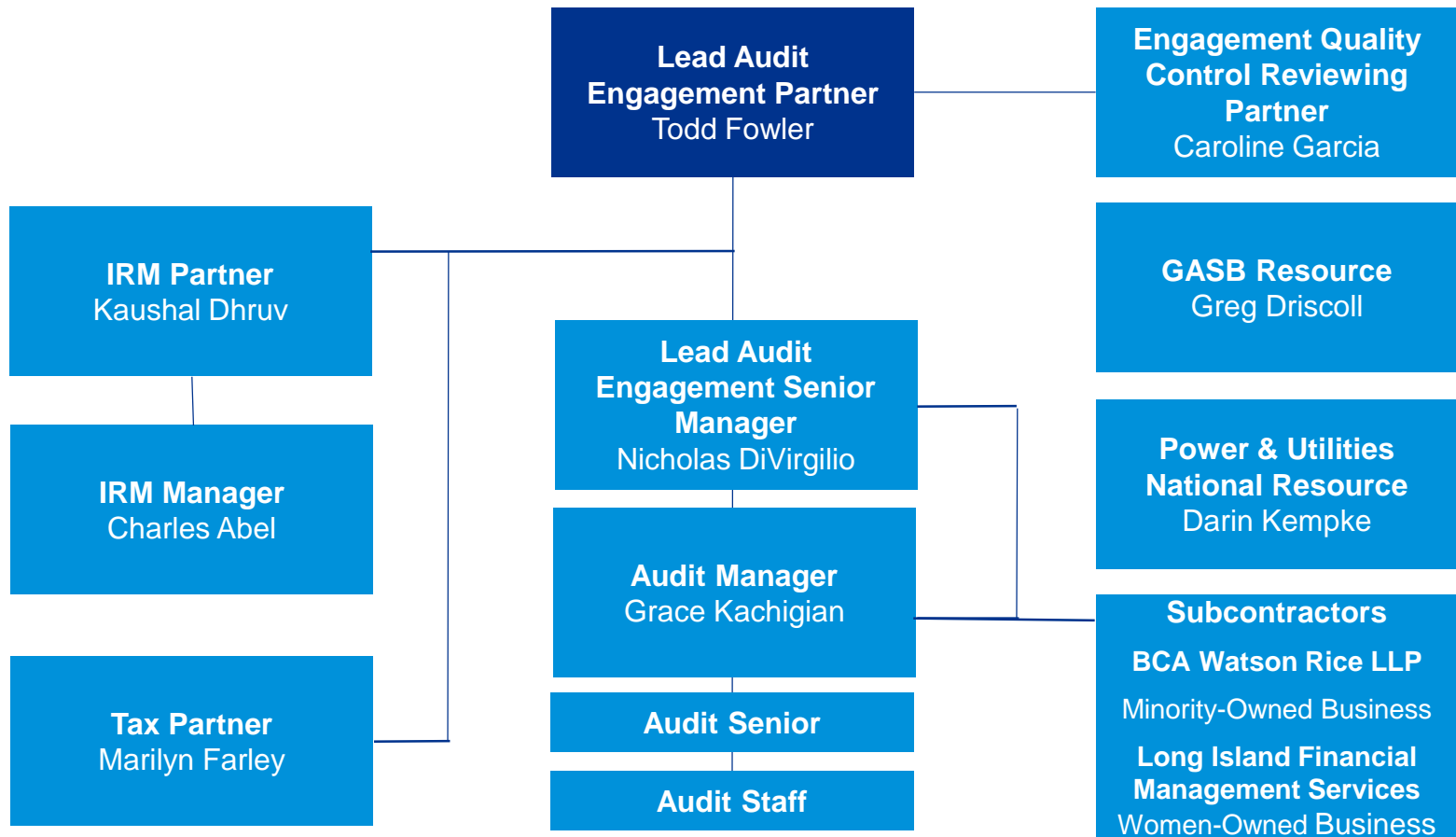


1.0

Client service team



# Client service team





2.0

Objective of an audit

# Objectives of an audit

- The objective of an audit of the financial statements is to enable the auditor to express an opinion about whether the financial statements that have been prepared by management with the oversight of the Audit Committee are presented fairly, in all material respects, in conformity with generally accepted accounting principles (GAAP), including Government Accounting Standards, as issued by the Government Accounting Standards Board (GASB).
- We plan and perform the audit to obtain reasonable, rather than absolute, assurance about whether the financial statements taken as a whole are free from material misstatement, whether due to fraud or error.
- We perform our audit in accordance with:
  - Auditing standards generally accepted in the United States of America as issued by the Auditing Standards Board of the American Institute of Certified Public Accountants (U.S. GAAS).
  - Government Auditing Standards issued by the Comptroller of the United States.
- Our audit includes:
  - Performing tests of the accounting records and such other procedures, as we consider necessary in the circumstances, based on our judgment, including the assessment of the risks of material misstatement, to provide a reasonable basis for our opinion.
  - Evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, and evaluating the overall presentation of the financial statements.



3.0

Risk assessment

# Risk assessment

Significant audit areas	Significant estimates	Significant unusual transactions/other items	Information technology matters
<ul style="list-style-type: none"> <li>— Revenue recognition</li> <li>— Long term debt</li> <li>— Capital assets</li> <li>— Investments (including Nuclear Decommissioning Trust)</li> </ul>	<ul style="list-style-type: none"> <li>— Asset retirement obligations</li> <li>— Derivative valuations</li> <li>— Other post-employment benefits</li> <li>— Investments (including Nuclear Decommissioning Trust)</li> </ul>	<ul style="list-style-type: none"> <li>— Implementation of new accounting pronouncements</li> <li>— Assessment of any outstanding, pending or threatened litigation</li> <li>— Canal Corp acquisition</li> <li>— Bond offering, if applicable</li> </ul>	<ul style="list-style-type: none"> <li>— General information technology environment</li> <li>— Related application controls</li> </ul>



4.0

Audit plan

# Audit plan - scope

<b>Scope of work</b>	<i>Audit of the financial statements for the New York Power Authority as of and for the two-year period ended December 31, 2016</i>
<b>Applicable financial reporting framework</b>	<i>U.S. generally accepted accounting principles (GAAP), including Government Accounting Standards, as issued by the Government Accounting Standards Board (GASB)</i>
<b>Applicable auditing standards</b>	<p><i>We perform our audit in accordance with:</i></p> <ul style="list-style-type: none"> <li><i>-Auditing standards generally accepted in the United States of America as issued by the Auditing Standards Board of the American Institute of Certified Public Accountants (U.S. GAAS)</i></li> <li><i>-Government Auditing Standards issued by the Comptroller of the United States</i></li> </ul>
<b>Other terms of engagement</b>	<p><i>Additional Reports to be issued:</i></p> <ul style="list-style-type: none"> <li><i>-Report on Internal Control Over Financial Reporting and Compliance and other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards as of December 31, 2016</i></li> <li><i>-Report on Investment Compliance as of December 31, 2016</i></li> <li><i>-Report on Compliance with Requirements That Could Have a Direct and Material Effect on Each Major Program and on Internal Control over Compliance in Accordance with the Uniform Guidance, if applicable</i></li> <li><i>-Revenue Bonds issuance consent and comfort letter, if applicable</i></li> </ul>

# Audit plan - Deliverables and time line

September – November 2016		December 2016	January – February 2017	March 2017
<ul style="list-style-type: none"> <li>— Identify financial statement fraud risks and assess the effect on the audit plan</li> <li>— Perform risk assessment procedures and identify risks</li> <li>— Assessment of audit risk and planning of substantive audit procedures</li> <li>— Determine audit strategy and identify critical accounting matters</li> <li>— Plan audit procedures</li> <li>— Finalize planned audit approach</li> </ul>	<ul style="list-style-type: none"> <li>— Perform walkthroughs of internal control processes</li> <li>— Test entity-wide and monitoring controls</li> <li>— Evaluate design of selected key controls</li> <li>— Test IT general controls</li> <li>— Test operating effectiveness of selected key controls</li> <li>— Perform interim substantive procedures</li> <li>— Evaluation of interim results and establish plan for performance of substantive audit procedures</li> </ul>	<ul style="list-style-type: none"> <li>— Present 2016 Audit Plan to the Audit Committee</li> <li>— Perform/send year-end confirmations (e.g. legal, debt, cash, investments, accounts receivable, revenue and derivatives)</li> <li>— Inventory observation attendance</li> </ul>	<ul style="list-style-type: none"> <li>— Meetings with management to discuss key issues</li> <li>— Test operating effectiveness of selected year-end controls</li> <li>— Perform substantive procedures and tests of detail</li> <li>— Perform procedures related to the Authority's investment compliance with the State of New York guidelines</li> <li>— Consider if audit evidence is sufficient and appropriate</li> <li>— Conclude on critical accounting matters and issues</li> </ul>	<ul style="list-style-type: none"> <li>— Confirm completion procedures</li> <li>— Form audit conclusions</li> <li>— Perform overall evaluation of financial statements and disclosures</li> <li>— Present required communications to Audit Committee</li> <li>— Form audit opinion on financial statements</li> <li>— Report on Internal Control over Financial Reporting and Compliance on Other Matters</li> <li>— Report on Investment Compliance</li> <li>— Finalize all deliverables</li> <li>— Prepare management letter comments, if applicable</li> </ul>



# Audit plan - Involvement of others

## Financial statement audit

### — Internal Audit

**KPMG will work with the Authority's Internal Audit function to perform a more efficient audit. Throughout our audit we will regularly meet with Jen Sutton to discuss:**

- The status of the internal audit reports
- Findings made by internal audit and determine the impact to our audit
- Reports we can leverage as part of our audit
- Findings made by KPMG which could have an impact on internal audit's reports
- Best practices observed by KPMG

# Audit plan - Involvement of others (continued)

## Financial statement audit

### — External Experts and Service Organizations

External Expert / Service Organization	Financial Statement Account	Description of Work
— Swap Financial Group	— Risk management activities - derivatives	— Determine the fair value and hedge effectiveness of interest rate swaps
— PA Consulting Group	— Risk management activities – derivatives	— Determine the fair value of commodity swaps
— Buck Consulting	— Other postemployment benefit obligation/asset	— Actuarial report for the Authority's GASB 45 Other Postemployment Benefits
— J.P. Morgan	— Investment in securities	— Custodian for the Authority's investment portfolio
— Ceridian	— Payroll expense	— Payroll services for the Authority
— New York ISO	— Revenue and accounts receivable	— Billing and settlement services related to the purchase and sale of power in New York



5.0

KPMG's Audit  
Committee Institute  
and Global Energy  
Institute

## KPMG's Audit Committee Institute (ACI)

In depth insights. In time to matter.

### ACI Programs

- KPMG/NACD Quarterly Audit Committee Webcast
  - September 29, 2016 (Replay available)
  - January 26, 2017
- 13<sup>th</sup> Annual Audit Committee Issues Conference
  - January 9 – 10, 2017
  - Boca Raton, FL
- Audit Committee Peer Exchanges
- Directors Roundtable Series (spring 2017)
- Audit Forum – Preconference to the NACD Global Board Leaders' Summit

### Suggested Publications (available for download at [www.kpmg.com/aci](http://www.kpmg.com/aci))

- Directors Quarterly Audit October 2016
- Q2 2016 Focus: Financial Reporting and Auditing Update
- Financial Reporting Risk Today: Hot Spots and Heightened Scrutiny

### Resources

- Audit Committee Insights – U.S. and International editions (biweekly electronic publications): [www.kpmginsights.com](http://www.kpmginsights.com)
- ACI Web site: [www.kpmg.com/aci](http://www.kpmg.com/aci)
- ACI mailbox: [auditcommittee@kpmg.com](mailto:auditcommittee@kpmg.com)
- ACI hotline: [1-877-KPMG-ACI](tel:1-877-KPMG-ACI)



# KPMG's Global Energy Institute

## Recent Webcast

- Key Tax Developments Affecting the Power and Utilities Industry

## Recent Publications

- 2016 KPMG CEO Survey Infographic (see next slide)
- 2016 Global Energy Conference Recap
- 2016 KPMG Energy Outlook Survey Results
- Plugged In: A Deeper Look into Power and Utilities
- Plugged In: Trends in the Energy Industry
- KPMG Corporate Finance: Energy Investment Banking (Q2 2016)

## Resources

- [KPMG Institute Website](#)
- [Global Energy Institute Website](#)



# 2016 KPMG CEO Outlook: Utilities Industry

## Growth

New markets & customers are the most important sources of growth

**87%** indicate growth opportunities are abundant

**50%** believe the industry is in a peak growth phase

## Cyber

Minimizing cyber security risk is viewed as a top strategic priority over the next three years

**1 in 10** utility CEOs say they are fully prepared for a cyber event

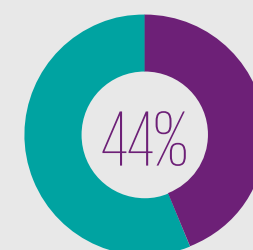


**85%** say their organization is somewhat prepared for a cyber event

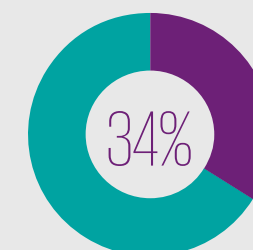
## Regulatory

Regulatory risk cited as most concerning to Utility CEOs

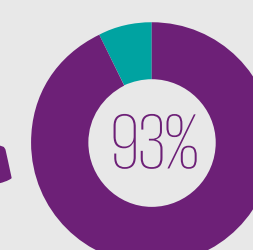
Utility CEOs more concerned than other industry CEOs that regulations will inhibit growth



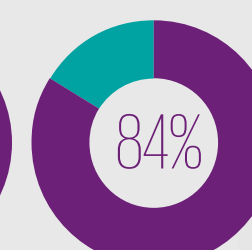
Utility CEOs



Other Industries



Utility CEOs



Other Industries

## Innovation & Analytics

Innovation is one of the top three issues on the personal agenda of Utility CEOs

**54%** describe their organization's approach to innovation as accelerated

The top 2 uses of Data & Analytics are to improve financial reporting and manage risk

Utility CEOs say their organizations use disruptive technologies most often to improve product/service offerings

**73%** vs. **63%** Other Industries

TOP 3

areas to driving innovations

Connecting in a beneficial way with university and/or other research institutes

Specifically including innovation in business strategy with clear targets and objectives

Having a formal process to generate/source ideas





# Appendices



A.1

# Responsibilities



# Responsibilities

## **Management is responsible for:**

- Adopting sound accounting policies
- Fairly presenting the financial statements, including disclosures, in conformity with GAAP
- Establishing and maintaining effective internal control over financial reporting (ICFR), including programs and controls to prevent, deter, and detect fraud
- Identifying and ensuring that the Authority complies with laws and regulations applicable to its activities, and for informing the auditor of any known material violations of such laws and regulations
- Making all financial records and related information available to the auditor
- Providing unrestricted access to personnel within the entity from whom the auditor determines it necessary to obtain audit evidence
- Adjusting the financial statements to correct material misstatements
- Providing the auditor with a letter confirming certain representations made during the audit that includes, but is not limited to, management's:
  - Disclosure of all significant deficiencies, including material weaknesses, in the design or operation of internal controls that could adversely affect the Authority's financial reporting
  - Acknowledgement of their responsibility for the design and implementation of programs and controls to prevent, deter, and detect fraud
  - Affirmation that the effects of any uncorrected misstatements aggregated by the auditor are immaterial, both individually and in the aggregate, to the financial statements taken as a whole

# Responsibilities (continued)

## **The Audit Committee is responsible for:**

- Oversight of the financial reporting process
- Oversight of the establishment and maintenance by management of programs and internal controls designed to prevent, deter, and detect fraud

## **Management and the Audit Committee are responsible for:**

- Setting the proper tone and creating and maintaining a culture of honesty and high ethical standards

**The audit of the financial statements does not relieve management or the Audit Committee of their responsibilities.**

# Responsibilities (continued)

## **KPMG is responsible for:**

- Forming and expressing an opinion about whether the financial statements that have been prepared by management, with the oversight of the Audit Committee, are presented fairly, in all material respects, in conformity with GAAP.
- Planning and performing our audit with an attitude of professional skepticism to obtain reasonable—not absolute—assurance about whether the financial statements are free of material misstatement, whether caused by fraud or error. Because of the nature of audit evidence and the characteristics of fraud, we are able to obtain reasonable, but not absolute, assurance that material misstatements will be detected. Our audit is not designed to detect error or fraud that is immaterial to the financial statements.
- Conducting the audit in accordance with professional standards and complying with the Code of Professional Conduct of the American Institute of Certified Public Accountants, and the ethical standards of relevant CPA societies and relevant state boards of accountancy.
- Evaluating ICFR as a basis for designing audit procedures, but not for the purpose of expressing an opinion on the effectiveness of the entity's ICFR.
- Communicating to management and the Audit Committee all required information, including significant matters.
- Communicating to management and the Audit Committee in writing all significant deficiencies and material weaknesses in internal control identified during the audit and reporting to management all deficiencies noted during our audit that are of sufficient importance to merit management's attention. The objective of our audit of the financial statements is not to report on the Authority's internal control and we are not obligated to search for material weaknesses or significant deficiencies as part of our audit of the financial statements.

# Responsibilities for other information in documents containing audited financial statements

- The auditors' report on the financial statements does not extend to other information in documents containing the audited financial statements, excluding required supplementary information..
- We are required to:
  - Read the other information to identify material inconsistencies with the audited financial statements or material misstatements of fact, and
  - Make appropriate arrangements with management or the Audit Committee to obtain the other information prior to the report release date.
- Any material inconsistencies or misstatements of fact that are not resolved prior to the report release date, and that require revision of the other information, may result in KPMG modifying or withholding the auditors' report or withdrawing from the engagement.



A.2

KPMG's audit  
approach and  
methodology

# KPMG's audit approach and methodology

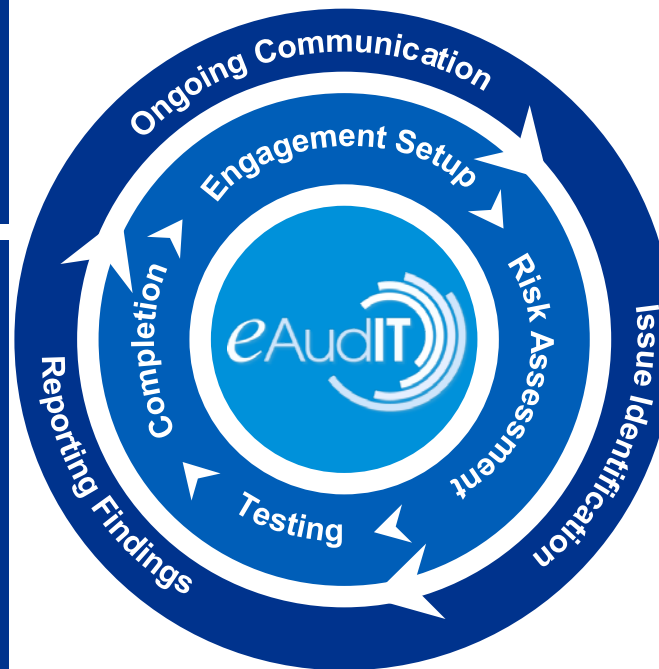
## Technology enabled audit work flow

### Engagement Setup

- Tailor the eAudit work flow to your circumstances
- Access global knowledge specific to your industry
- Team selection and timetable

### Completion

- Update risk assessment
- Perform overall evaluation of results and the financial statements
- Form and issue audit opinion on the financial statements
- Obtain written representations from management
- Required Audit Committee communications
- Debrief audit process



### Risk Assessment

- Understand your business and financial processes
- Identify significant risks
- Plan involvement of specialists and others including experts, internal auditors, service organizations, and other auditors
- Determine audit approach
- Evaluate design and implementation of your internal controls

### Testing

- Test effectiveness of internal controls, as applicable
- Perform substantive tests



A.3

Materiality

# Audit plan - Materiality

- Professional standards require that we exercise professional judgment when we consider materiality and its relationship with audit risk when determining the nature, timing, and extent of our audit procedures, and when evaluating the effect of misstatements.
- Information is material if its misstatement or omission could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.
- Judgments about materiality are made in light of surrounding circumstances and are affected by the size or nature of a misstatement, or a combination of both.
- Judgments about matters that are material to users of the financial statements are based on a consideration of the common financial information needs of users as a group. The possible effect of misstatements on specific individual users, whose needs may vary widely, is not considered.





A.4

Audit fees

# Audit fees

	2016 Estimated	2015 Actual
Audit fees		
Financial statements and related notes to the financial statements		
Report on Internal Control Over Financial Reporting and Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Accounting Standards</i>	\$297,000	\$288,000
Investment Compliance Report		
<b>Total fees</b>	<b>\$297,000</b>	<b>\$288,000</b>

\* 2016 fees will be based on the actual number of hours incurred at the applicable hourly rates set out in our agreement. The represents the amount not to exceed for the 2016 audit.



A.5

Independence

# KPMG independence quality controls

## **KPMG maintains a comprehensive system of quality controls designed to maintain our independence**

- Pre-approval of all worldwide engagements by the audit engagement team through Sentinel, a KPMG independence verification system
- Monitoring employment relationships
- Tracking partner rotation requirements using PRS, the firm's automated partner rotation tracking system
- Automated investment tracking system used by all KPMG member firms (KICS)
- Training and awareness programs
- Compliance testing programs
- Annual reporting to the Audit Committee

**In our professional judgment, we are independent with respect to the New York Power Authority, as that term is defined by the professional standards.**





[kpmg.com/socialmedia](https://kpmg.com/socialmedia)

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