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6 October 2014

"MUSKRAT FALLS OVERSIGHT COMMITTEE ADVISORY SERVICES"

Dear Mr. Martin,

The Muskrat Falls Project (the "Project") is a highly important and sensitive file for the Government and citizens of Newfoundland and Labrador. As you have experienced first-hand, EY is fully committed and passionate about participating and providing value to the Oversight Committee as it performs its oversight role.

It is important that the Oversight Committee has the right skills at the right time, which can be on a moment's notice, with a sensitive file such as this. With this in mind, we have structured a proposal and team that brings together a carefully chosen blend of construction and program management, public sector, and Power and Utilities sector experience.

Thank you for the opportunity to provide a proposal for advisory services to support the Oversight Committee. We would welcome the opportunity to review our proposal with you and respond to any questions or concerns you may have.

Yours very truly,

David Steele Partner Newfoundland Advisory Services Leader (709) 570-8264

Ernst & young LLP

Richard Noble Associate Partner Canadian Major Capital Program Leader (416) 943-3151

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Confidential and proprietary – Disclosure of this proposal to third parties is prohibited. It is intended to be used solely for the purpose of evaluating whether or not to engage us to provide you with professional services. This proposal does not constitute an agreement between us or an offer to perform services — a binding agreement between us shall exist only upon execution of a mutually agreed engagement letter or contract.

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"EY" as used in this proposal means the Canadian firm of EY LLP or, as the context requires, other member firms of the global EY network, each of which is a separate and independent legal entity.

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A. Executive summary

EY joins the people and Government of Newfoundland and Labrador in sharing the hope for growth and prosperity presented by the Muskrat Falls Project. Our local leadership is committed to be the trusted advisor to the Government of Newfoundland and Labrador (the "Government") in overseeing this landmark project. We are committed to combine the local perspective with the leading global competencies of our firm. As a global leader in capital project advisory, our professionals, methodologies and experience are second to none.

The size and complexity of the Muskrat Falls Project is well understood by our team. We also know that the stakes are high from many angles (social, economic and political), stakeholders' relationships are complex and there is intense public scrutiny on the project's performance. Given these dynamics, it will take more than meeting your RFP requirements "on paper". Your service provider will have to go outside the typical norms of consulting service delivery to provide you with an exceptional client experience to help the Oversight Committee, the Government, and the citizens of this Province are successful as it relates to the Muskrat Falls Project.

We believe we can make this relationship a success by:

- Demonstrating Commitment and Responsiveness The Project will bring with it many phases, many reports and circumstances that will call for specific skills at sometimes on a moment's notice. As you experienced with EY on prior projects, this is our mantra on how we operate. We provide immediate responsiveness. EY are on-board and a part of your team. You will not be left hanging with EY at your side. You have the full support of David Steele (St. John's Advisory Leader), Richard Noble (Canadian Major Capital Project Leader), and Charles-Antoine St-Jean (Canadian Public Sector Leader). We are all committed to helping the Oversight Committee successfully meet its objectives.
- EY will keep a forward momentum Government has issued a Shareholder Letter to Nalcor with specific information requirements. EY is in full agreement with the stated information requirements and it actually maps to EY's proprietary approach for reviewing projects. This will assist the Oversight Committee in continuing the momentum without having to reset or negotiate any new changes to the requirements with Nalcor.
 - EY has invested itself and has had notable exposure to the Project. The stakeholder and time sensitivity of this project requires the Oversight Committee maintain a forward momentum. That is what EY will provide.
- Local strength and empowerment, supported by National and Global resources The leader of our service delivery team, David Steele, resides in St. John's and has full authority to make decisions that will impact your ability to succeed. We understand your culture and the political realities you are currently operating within. David will be supported by handpicked executives and subject matter resources from across Canada and the globe. You will have "around the corner support" at all times and given the variability of support required by the Oversight Committee through the life of the Project, we will draw on resources from elsewhere as required.

David has established himself as being one of the most resourceful and connected Partners in the global EY practice. As he has done on many projects before, he will bring the right skill and level resources at the right time.

- Independent EY is independent from the Project. We confirm to you that we have done no work for the Lower Churchill Project, which has preserved our ability to provide Government independent and objective advice and will continue to do so. We have performed our own internal due diligence, and this opportunity to continue working with Government was approved by our executive.
- Flexibility in approach The assistance you have will vary. You have worked with EY before. We understand the dynamics of this file and have demonstrated a flexible approach. You will need us to sometimes be in front of you, sometimes at your side and sometimes behind you, depending on the circumstances and task at hand. With David as your local Partner, rest assured, you will have the support you need and in the form it is needed. We respect you and the varied role you will require from EY; this will be an asset to you moving forward.

In addition, you will also require flexibility in developing outputs/ solutions. At EY, we recognize that the outputs we produce or help our clients produce are stronger when we work collaboratively to validate content and build tone/ context. This is particularly important for this project, as was demonstrated with full conviction during prior assignments with Government and the Oversight Committee.

In summary, the EY team, led by your local Partner in David Steele and technical Partner in Richard Noble, will continue delivering at the high standards you have come to expect of us! We are committed to make you successful and that will not waiver no matter what obstacles we face together.

In addition to the above points, several highlights of our proposal are listed below:

Proven methods and tools - Deep Analytical Skills on Cost, Schedule and Risk

EY operates under a single global strategy, code of practice and values system, leveraging common methodologies and approaches. The specific approach proposed for this assignment has been used on more than 50 project oversight and review assignments in Canada. Our methods are underpinned by simple well organized work steps, smart analytical techniques and are backed by our knowledge of standards and leading practices in project and program management.

These services have identified material project overruns and schedule delays. They have also helped clients establish corrective action, resulting in successful outcomes.

We not only review projects, we do projects! Our practice manages critical business initiatives as well as providing assurance services. As you have experienced, we will bring you resources who have had direct experience in managing and working with multi-billion dollar projects. These are the same people who have built our proprietary methods and approach for managing and reviewing

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major capital projects. Our "field seasoned" practitioners and the methods and approach they bring to the table will be credible with the Oversight Committee and other stakeholders (Nalcor, media, and general public).

- We invest in project management leading practices and thought leadership. EY not only deploys MCP people, our methodologies and tools to assist our clients, but we also conduct regular benchmarking of project management practices world-wide, analyze this data and feed this back into our service development. The Oversight Committee will feel the strength of this investment, as our Canadian team is connected to world class practitioners and thought leadership from around the globe.
- We can get quantitative about the cost and schedule risks. Many of our competitors only review process and adherence to standards, as of course do we. However, we also have defined flexible tests of project plans, budgeting, actual costs and timeline progress as well as reporting. These tests can give quantitative insight as to the progress against plan, the feasibility of success and the accuracy of reporting being provided to management.

An experienced team

EY`s handpicked core team is drawn from our Canadian Major Capital Programs (MCP) practice that has helped clients launch and manage major capital programs as well as conduct thorough, insightful reviews and audits of projects and major programs. This team has worked with public and private sector clients as well as Engineering/Construction companies on several projects of similar scale and complexity. We bring the foresight and experience to proactively identify and address risks. Our team comes with professional accreditations and a significant number of years in program management leadership experience world-wide.

The proposed EY team has recently reviewed and provided recommendation on the Oversight Committee protocols, governance structure and processes. David Steele, Richard Noble, Aman Gill, Emiliano Mancini, and Mike Haycox enjoyed working with your team and look forward to support you on the rest of the journey. Our team is very familiar with the Government and Muskrat Falls project environment and we will be able to "hit the road running".

We will draw upon other global resources on an as-needed basis.

The strength of our brand and commitment of our proposed team will provide you the assurance you need to oversee this project. Hopefully our proposal will demonstrate our enthusiasm and commitment to be your advisor.



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B. Our Experience

Major Capital Project and Power and Utilities Sector Focus

EY is a global leader in advisory services to the industry as well as the traditional areas of assurance, tax and transaction. Worldwide, our 190,000 people in 150 countries are united by our shared values and an unwavering commitment to quality. We make a difference by helping our people, our clients and our wider communities achieve potential. Our Canadian firm was founded in Toronto in 1864. We have approximately 3,600 people, including approximately 275 partners, across Canada.

Major Capital Project

Managing the complexity of major capital projects in today's economy has never been more challenging. Capital projects increasingly comprise a significant percentage of company spend and require particular focus on budgets, schedules and execution.

EY's Major Capital Projects (MCP) Advisory practice has successfully worked with leading businesses to support the safe, predictable and competitive delivery of a wide range of global capital mega-projects.

Our MCP practice is comprised of experienced engineers, architects, project managers, construction managers, project controls, lawyers, economists and accountants professionals with years of on-site industry experience. We are focused on delivering maximum value to our clients through leading practice methodologies, systems and controls carefully designed to accelerate project development time and minimize capital risks without sacrificing quality.

We work with our clients to provide oversight and deliver impartial and experienced guidance during the development and execution of their Major Capital Projects. Our work spans the lifecycle of a construction project from planning and designs through to completion. We work with our clients to provide oversight and develop the methodology, systems and control tools to address project challenges head on and also to allow for the realization of new opportunities along the way.

Our service includes business case assessment, contracting strategy and implementation, organizational design, roles, responsibilities and work breakdown allocation, project controls and oversight, reporting and governance, qualitative and quantitative risk assessment, commercial optimization, tax, marketing, foreign exchange management, cost control, as well as community, public and indigenous affairs.

Power and Utilities

While other Firms are perhaps more generalists in public sector and private sector initiatives, Power and Utilities is genuinely one of EY's primary sectors of focus. One of our key investments is the Global Power & Utilities Center, which is dedicated to offering industry insight and coordinating a network of more than 3,500 power and utilities professionals who are ready to develop practical approaches to the assurance, advisory, tax, transactions, and finance-related issues you face.

Our Advisory services help execute enterprise-wide performance transformation initiatives. We help turn strategy into reality. This means we are not only thinking about the short term of designing cost saving ideas, we take it further into execution and develop an assurance and execution model to ensure success.

Our approach - grounded in power and utility specific experience and committed to delivering measurable, sustainable results - can help you adapt and succeed, even in an uncertain environment.

We have in excess of 20 years' experience in the power and utility sector globally and is designated global focus sector for our firm.

EY provides advisory services to numerous energy companies located in North America, a select list of which is provided below.

Δ	F	P

AES

AGL Resources

Allegheny

Alliance Pipeline

Alliant Energy

Ameren

Amerada Hess Corporations

Atmos Energy

Avista

BC Hydro

Bruce Power

Calpine

Cinergy

Citrus Pipeline-FL Gas Transmission

CMS Energy

Commonwealth Energy

Con Ed

Constellation Energy

DQE

DTE Energy

Enbridge

Encana Corp (fka. AEC)

Entergy- Koch

Equitable Resources

Exelon

First Energy

Fortis

Hydro OneHydro-Quebec

IESO

Idacorp

Keyspan

Koch Gateway Pipeline

LG&E Energy

Manitoba Hydro

Memphis Light Gas and Water

Mid American Holdings

Mirant

National Grid Company

NICOR Gas

Northeast Utilities

Ontario Power Generation

Orion Power Holdings

Pacificorp

PG&E Corp

PPL Corp

PSE&G

Progress Energy

Questar

Reliant Energy

SCANA

Semco Energy

Sempra Energy

Sithe Energy

Southern Co

Texas Gas Transmission

The Williams Companies

Toronto Hydro

TransCanada

Trans Alta Utilities

Transcontinental GasPipeline Co

Transwestern Pipeline Co

- **Dominion Resources**
- Dayton Power and Light
- Dynegy
- Edison International
- Northwestern
- OGE Corp
- Oglethorpe Power
- Ontario Power Generation
- TXU
- Utilicorp
- Wisconsin Electric Power
- El Paso

Our proposed team is directly connected to our Global Power & Utilities Center to bring to you leading practices and insights in identifying and addressing key risks. When industry-specific issues arise, our team has ready access to our over 3,500 global power- and utilities-focused professionals.

EY's power and utilities practice is an industry leader for delivering advisory services to power and utilities companies. Our experience and qualifications in this industry are both broad and deep:

- EY provides assurance, advisory, tax or transaction support services to 96% of the utilities companies listed in the Fortune Global 500.
- We have several hundred US-based power- and utilities-focused professionals.
- We continue to invest in the industry through our North American Electric & Gas Center and Global Power & Utilities Center to facilitate knowledge sharing and thought leadership development.
- We are actively involved in power- and utilities-focused organizations such as EEI, AGA and EPSA.
- We also meet periodically with staff members of FERC, EEI and AGA to discuss issues affecting the industry. We actively monitor and participate in industry issues discussions with the SEC, Accounting Standards Executive Committee (ASEC), Financial Accounting Standards Board (FASB) and Emerging Issues Task Force (EITF).
- We participate in the EXNET Utility Accounting and Tax conferences and attend regional and local utility regulators' conferences.
- In addition to keeping current with your environment, we also sponsor our own regional electric and gas energy industry conferences and client training sessions to share important current trends, laws and events.

EY has invested heavily in developing thought leadership for both the Power and Utilities sector and for Major Capital Project, and have therefore produced volumes whitepapers, publications, and brochures. We have purposefully left those out of this proposal (due to length and purpose), however, we will bring those to you as appropriate (when use will meet need) to support the Oversight Committee in meeting its objectives.

The following table introduces some summaries of sample thought leadership produced by EY in your relevant sector of activities:

EY's Major Capital Projects Thought Leadership

EY Canada's Capital Project Newsletter: Building Blocks

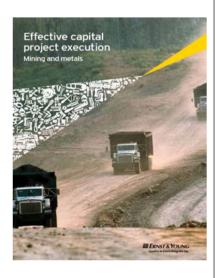
EY publishes newsletters for internal and client distribution 6 times a year, that focus around contracts, risks, cost and schedule monitoring and other issues related to major capital projects.



Effective Capital Project Execution

EY has successfully partnered with leading clients to support the safe, predictable and competitive delivery of a wide range of global capital megaprojects.

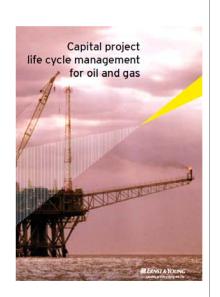
From this body of experience we have identified the key support areas as critical leverage points in achieving project delivery effectiveness that are outlined in this publication.



Capital Project Life Cycle Management.

In this publication, EY looks into effective strategies to align capital projects with the overall goals of the organization, determining key factors for capital projects success. With that perspective in mind, we have designed the following offerings to aid such objective:

- Capital Project Risk Assessment
- Project Contract Management



Construction Fraud is on the Rise: How to Mitigate It?

A recent EY study of global fraud based on more than 1,400 anonymous interviews with CFOs and other senior executives performed in 36 countries.

While this risk is not new, the prevalence of construction fraud is of great concern to executives operating in an increasingly cost-sensitive environment. The publication outlines how companies can take the initiative to address such risk by:

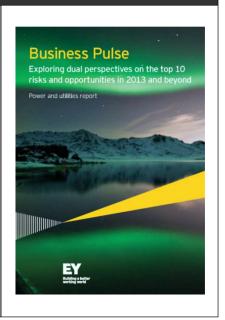
- Performing fraud risk assessments
- Establish strong internal controls and conduct internal audits
- Monitor those controls to ensure they are working properly
- Ensure that fraud prevention is embedded in the corporate culture



EY's Power and Utilities Report

EY's P&U Sector Report: Business Pulse

This technical report focuses on forecasting the future of P&U companies through the analysis of risks and opportunities with business executives and EY specialists



Qualifications

EY has an enviable history in providing very comparable services on equally comparable projects. A sample of our assignments in this arena is provided below.

	1. Review of Government Protocols to Oversee the Muskrat Falls Project
Client	Government of Newfoundland and Labrador
Description of Project	One of the Province's largest and most important major capital projects. It will provide residents of the Province with clean, reliable energy at stable prices, with opportunities to export excess power through the Maritime Provinces via a subsea link. The Project includes construction of an 824 megawatt (MW) hydroelectric dam on the lower Churchill River in Labrador, and more than 1,500 km of associated transmission lines.
Description of services	 EY conducted an assessment of the Oversight Committee's protocols under development to: ▶ Provide recommendations on the Oversight Committee's governance structure and processes. ▶ Conduct gap assessment of the Government's Information Request List. Main activities conducted include:

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1. Review of Government Protocols to Oversee the Muskrat Falls Project

- ► Review data related to initial thinking on the Government's protocols and certain agreement defining the relationships between different stakeholders.
- ► Interviews with key stakeholders from the Government and Nalcor to understand Project environment and governance landscape.
- ► Presentation of value-added recommendations to the Oversight Committee around project oversight and assurance functions.

Relevance to this project

- ▶ Demonstration of our unwavering commitment to the Government and the Oversight Committee in relation to this mandate.
- ► Ability to work collaboratively and remain flexible, as solutions/ work products are developed in highly sensitive environment.
- ► Not only do we fully understand your requirements and expectations, we are able to rapidly deploy, have the minimum ramp up time and have a track record of working with you to achieve results.
- ▶ Ultimately, we understand the imperatives of the success of the project to the Government and people of Newfoundland and Labrador and will continue to demonstrate our commitment to you.

2.	Generating Station Refurbishment Project - Monitoring and reporting of
	project risks and financial controls

Client	New Brunswick Power						
Description of Project	Multi-billion dollars refurbishment of nuclear power station. The Project included the replacement of all calandria tubes as well as steam generators.						
Description of services	Monitoring and reporting of the project risks and financial controls. This included the development and implementation of specific project risk management and reporting processes.						
	Main activities accomplished on the Project include:						
	 Performed initial risk assessment to identify key project, external and vendor performance risks. 						
	► Worked with management team to establish risks criticality and reporting structure for the project.						
	► Evaluated the financial performance and controls related to spending, contingency management, and account allocations in order to establish an independent monitoring program for the project.						
	Performed a monitoring program for other risk areas that influence the project success such as governance processes, progress against actual, the payment of the vendors based on delivery and performance, identification of potential and actual claims, and cross-corporate risks.						
	▶ Reported to the Audit and Nuclear Oversight Committees on a regular basis.						
	► Testified in EUB hearing for the company to defend their oversight and control processes.						
Relevance to this project	► EY was able to address specifically project risk as well as financial risk and oversight depth.						
	► In addition, this was an Atlantic provinces' project serviced by members of our East Coast team included in this proposal.						
	▶ We will continue that commitment with St John's team support and some of the best resources we have from across Atlantic Canada, Canada and the globe.						

3. High Profile Nuclear Power Generator - Multiple Project Oversight and Assurance activities on projects valued greater than \$5Billion

Client	Bruce Power
Description of Project	The client was in the process of completing a Multi-Billion refurbishment and construction program as well as upgrading its Project Management and Construction (PMC) practices in preparation for future major construction work. EY conducted targeted reviews, audits and assessments providing recommendations on upgrades to project, program and portfolio management. EY also assisted in the deployment planning for those upgrades across the organization.
Description of services	 Our various reviews and oversight activities covered: Project Schedule Management Assessment including review of the processes, the reporting and the methods of driving contractor schedule performance through project control and contractual means. Specific schedule risks were identified and improvements to the management including Earned Value systems were proposed and implemented. Procurement/Contract Management Audits and specific evaluation of contractors own management processes and reporting. This included assessment of contract structure, management, performance and compliance intercepting risks and savings in the tens of millions of dollars and intercepting months of schedule delays. Program Management & Construction process upgrade program including improvements to the project engineering, construction and contracting processes. Project Portfolio Management Processes including alignment to PMI Portfolio Management Body of Knowledge areas as well as gated lifecycle and funding approvals and alignment with business/operational planning across multiple business units. Development of the Lessons Learned document for the \$4.5Billion Reactor Refurbishment program. The EY team was also used as trusted advisors in solving significant program management and contract issues and advising on related process improvements ranging from to negotiation management for contracts in the \$100s of millions through to project portfolio management. In each case, the resulting recommendations and roadmap delineated how these gaps were to be filled and was used as basis of prioritized corrective action by the client and its contractors. This included specific hands-on support by EY for implementing their integrated project gating and PMC framework.

3. High Profile Nuclear Power Generator - Multiple Project Oversight and Assurance activities on projects valued greater than \$5Billion

Relevance to this project

- ► EY was able to intercept significant cost and schedule risks and became relied on by the senior executive for doing so with a rigour surpassing the predecessors from EY's big 4 competitors.
- ► EY demonstrated not only the knowledge of techniques and structures required to deliver projects of the scale of LCP/Muskrat Falls. We also earned credibility for the oversight functions and the very high powered program delivery team and VP Programs.

4. Project Assurance and Oversight for London 2012 - Olympic Delivery Authority

Client

London 2012 - Olympic Delivery Authority (ODA)

Description of Project

Deliver the new venues and infrastructure required to host the London 2012 Olympic and Paralympic Games.

The publicly funded ODA was established to provide management and external stakeholders with assurance that the highly complex program of work would achieve its objectives.

Description of services

EY was appointed as the company provider of assurance and advisory services for the Olympic Delivery Authority (ODA). The appointment had a term duration of six years for the core services of Internal Assurance, Security and Advisory Program (including business, IT and strategic security).

EY services focused on assuring the effectiveness of the project control and oversight frameworks. The services encompassed specialized support in acquisitions, construction, logistics and strategic challenges and EY supported the needs of the ODA, providing a wide range of services and a significant number of strategic resources.

Key features were as follows:

- During initiation and planning phases, the focus was on making sure that processes and controls were embedded and operating effectively and consistently.
- ▶ During construction, the spotlight moved to the project performances, management of risk and interfaces/dependencies across projects.
- ▶ In the final stage, effective close out of project was the center stage.

4. Project Assurance and Oversight for London 2012 - Olympic Delivery Authority

Relevance to this project

- Assuring multiple levels of government and other external and internal stakeholders on the effectiveness of project control frameworks as well as project performance.
- Specific interception of scope, cost, schedule and contractual risks on this globally high profile initiative.
- ► EY's highly praised Manager for this assignment is now a member of EY Canada's team and is part of the proposed team.

5. John Hart Replacement Project

Client

BC Hydro / Partnerships BC

Description of Project

The John Hart Replacement Project (JHRP) is a \$1 billion project to replace an ageing run-of-river hydro power station on the Campbell River, Vancouver Island. This first-of-a-kind is structured as a DBFR (Design Build Finance Rehabilitate) with a 15 year term post construction. The project includes development of a new 135MW power station, a flow bypass, and a 1km tunnel transmitting water from the up-stream reservoir to the power house. This project is essential for addressing major seismic and environmental risks at the existing facility. It is also a key part of BC's strategy for achieving self-sustainability.

Description of services

EY was appointed by PBC and BC Hydro to provide advisory services the development of the Project from initial business case that was submitted to BCH Board and Treasury Board for approval, through to the development of evaluation criteria / value for money methodology and now into the procurement documents:

- ► Leading in the VFM analysis including constructing the PSC and shadow bid models, conducting statistical analysis using Monte Carlo simulation, and continuously updating models;
- ► Leading in the development of the "ratepayer analysis", working closely with BC Hydro's finance division to assess and present the impact of each procurement option on the ratepayer. This also involved liaising with BC Hydro's regulatory team to pre-empt any concerns that might arise in seeking approval from the BC Utilities Commission;
- ► Presenting project analysis at BC Hydro board level to assist the project team in securing support for major project decisions;
- ► Leading workshops with Partnerships BC and BC Hydro's technical project team to

5. John Hart Replacement Project

develop detailed risk registers;

- ► Developing a robust and commercial payment mechanism that addresses the key project risks, critical concerns and business drivers obtained through extensive work-shopping with BC Hydro's team of engineers and project consultants;
- ▶ Developing the PSC, shadow bid and the value for money analysis;
- ► Working with the legal advisors to review and contribute to financial and commercial components of the RFQ, RFP, Project Agreement, and schedules; and
- ► Developing materials for and leading the market sounding exercise for the Project.

Relevance to this project

- ▶ Demonstrates our continued involvement in groundbreaking innovative projects in the P3 and ACF sector.
- Demonstrates our ability to advise on large energy power generation projects.
- Consideration of a number of procurement methods from traditional, P3 and wider ACF with a new innovation on P3 selected as the procurement methodology.

6. Risk Management Program Assessment for plant construction for a nuclear power utility

Client North American Power and Utility Company Description Construction of new nuclear power plant of Project Description As part of an ongoing audit program EY provides for a power utility constructing a of services new nuclear power plant, the client performs annual risk assessments. EY conducted a Risk Management Assessment for the construction of a new nuclear power plant. As part of the audit program, our construction team revisited the risk management program and performed the following assessments: ▶ Risk identification and analysis processes - verification that robust processes and procedures have been established, with adequate personnel in place to manage the risks and mitigation plans. ▶ Risk mitigation activities, and risk monitoring and control activities - assessing the mitigation plans and response actions to ensure that there is adequate responses and that they are not ad-hoc; assessing the risk management meetings that take

place and the ongoing monitoring of the risks as they relate to potential project

6. Risk Management Program Assessment for plant construction for a nuclear power utility

impacts including safety, quality, cost and schedule.

- ▶ Risk oversight procedure content, as well as implementation and compliance with this procedure - review of the project's risk management procedures to ensure alignment of the company's enterprise risk program, reviewing procedure requirements for adequacy of risk management as well as deliverables and accountability of risk stakeholders.
- ▶ Risk reporting process including the adequacy of the risk register and risk register updates - assessment of the current project risk register, the frequency of updates and mitigation plans, and the reporting of project risks through upper management for communication outside of the project.

Relevance to this project

- ► EY was able to provide leading practice opportunities for the client to consider for implementation in their risk management program.
- ► EY was able to provide verification that the actions of those accountable for execution of the risk management program were in compliance with the governing procedures and processes.

7. Prudency review of construction controls for a major northeast utility

Client North American Utility Company Description A prominent northeast utility was faced with a potential \$200m+ penalty due to a of Project public service commission investigation of the prudency of construction costs and controls in light of fraudulent behaviors identified within the utility. The public service commission's position was that the utility's construction management controls were inadequate or imprudent at the time the frauds occurred, including the controls for contract award and contractor payments. Description The client engaged EY to perform an independent contemporaneous assessment of services of the corporate and construction control environment associated with construction activities for street utility (underground electric, gas and steam) projects during the timeframe within which the frauds occurred, as well as the controls put in place subsequent to this time period. EY evaluated the adequacy of the client's organization, policies and procedures, systems and controls including the contract administration manual, contracting methodologies, and contract terms and conditions. EY evaluated the competitiveness of the pricing approach which included the usage of prenegotiated unit price listings and specifications.

7. Prudency review of construction controls for a major northeast utility

- ► EY performed a benchmark comparison with nearly a dozen peer utilities to understand the controls that were prevalent across the industry at the time the frauds occurred.
- ► EY evaluated the assumptions, approach, methodology and conclusions of the report prepared by the regulatory agency's third-party consultant that alleged over \$200m in damages due to fraud, waste and abuse as a result of deficient controls in the client's construction program.
- ► EY prepared and presented results at a technical conference held by the regulatory agency.

Relevance to this project

- ► EY provided an independent assessment of the prudency of the control environment, identifying in many instances alignment with established contemporaneous practice across peer utilities.
- ► EY provided construction management and fraud investigation subject matter resources credentialized to provide testimony at the technical conference on the adequacy of the client's construction program.
- ► EY provided independent assessment of the approach, assumptions and observations identified by the regulatory agency's third-party consultant.

8. Governance and control assessment for Northeast utility transmission projects

Client	Power and Utility Company
Description of Project	A power and utility firm operating in the northeast engaged EY to perform a leading practices assessment of the existing governance and control framework and the administration of construction contracts. The scope of this engagement included all client transmission projects performed by two contractors who were engaged to design and build major transmission projects.
Description of services	The objective of this review was to assess the adequacy of the governance and controls in place for the operation of the firm's construction management department. More specifically, EY focused on the following elements: • Strategic alignment – including governance board and work delivery management team activities, (e.g., roles and responsibilities, organizational structure and oversight).

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8. Governance and control assessment for Northeast utility transmission projects

- ➤ Stakeholder engagement and communications including communication and coordination with various internal and external departments, with key stakeholder groups (e.g., asset management) and support groups (e.g., regulatory, procurement).
- ► Contract management including target cost development and monitoring (ratcheting and work breakdown structure), review of overhead costs, resource planning methods, process for authorizing work and metrics/KPIs.
- ► Risk management including work delivery's execution and administration of construction contracts, insurance, guarantees, document/data repositories and retention.

Relevance to this project

- ► EY was able to identify multiple areas of risk/improvement including:
- Standard work breakdown structures were not fully developed or implemented for projects
- ► Enhancements to unit rate spreadsheet controls were required to support protection of data. Also, consistent definitions for unit rates and the process used to update and add new unit rates needed to be completed
- ► The KPI scorecard procedures that document how the scorecard is developed, reviewed and approved needed to be improved. Also, the KPI auditing procedure to be revised to reflect the current process
- The commercial review process around construction invoices was not fully developed

9. Multiple construction cost, risk and process audits for a major utility

Client	Power and Utility Company
Description of Project	A major utility in North America significantly increased its construction expenditures under a multi-billion construction program encompassing multiple facilities. The client sought to gain insight into their planning and execution efforts and capabilities compared to industry leading practices.
Description of services	EY provided a risk assessment identifying issues associated with the client's project delivery methods and contract structure, as well as underdeveloped processes and controls related to: ▶ Cost control and tracking

9. Multiple construction cost, risk and process audits for a major utility

- Vendor procurement and payment
- Schedule management
- ▶ Forecasting
- ▶ Organizational effectiveness
- Project status and progress
- ► Risk management

Relevance to this project

- ► EY's efforts resulted in a number of findings and recommendations which were addressed through management action, including:
- ► Implementation of a robust design/constructability review process which resulted in value engineering opportunities and savings of millions of dollars
- ► Development and implementation of a robust change management program and related project management software platform
- ► Outsourcing of the quality assurance functions based on the lack of internal capabilities
- ► Improved procurement processes and controls
- ► Realigning the role of the owner's engineer based on identified deficiencies in performance, segregation of duties and duplicative overhead
- ► Numerous non-compliance observations relating to the contractor safety program and recommendations to improve project safety culture
- Recommendations to improve the quality assurance function including improvements relating to surveillances, non-conformance tracking and reporting

	10. Construction process and cost assessment for a major utility					
Client	Power and Utility Company					
Description of Project	A major North American utility was undertaking a massive capital program that includes several highly complex generation projects totaling over \$20 billion. EY developed a monitoring program for the company's internal auditing group that addresses the key process and control risks over the capital program lifecycle.					
Description of services	Since 2010, EY has planned and executed the construction related internal audits on an annual and recurring basis including assessments of the following: ► Contract administration ► Budget and cost management ► Time and material cost evaluations ► Contract strategy and development ► Vendor quality ► Project execution plan ► Change management ► Contract flowdown provision verification ► Integration management ► Information management ► Scheduling ► Regulatory compliance					
Relevance to this project	 EY assessments resulted in a number of findings and recommendations which were addressed through management action, including: Improved invoice review and approval process to address the inherent risk related to the invoicing processes of the EPC contractor Identification of potentially recoverable overcharges invoiced by contractor Enhanced project execution plan and project controls Improved change management review process Identification of risk in the vendor quality oversight function Opportunities for improvement of cost controls 					

We recognize that some client names above have listed anonymously, as permission to use their names in our proposal would require consent. If The Oversight Committee would like to know the names of any of these projects, please request and EY will go through the appropriate channels and provide the requested additional information.

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C. Our Team

Overview and roles

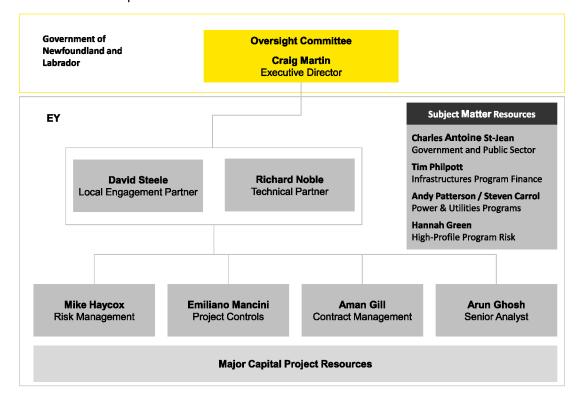
EY's proposed team include key representatives from our Major Capital Projects practice and Advisory Services with deep and vast experience in Power and Utility and Infrastructure projects both in the Atlantic market and globally. The core team brings industry and consultancy experience and will be supported by top-level Subject Matter Resources in North America.

Furthermore, EY Major Capital Project Resources world-wide will be leveraged to ensure there is sufficient capacity to deliver the assignments in the required timeframes.

The key features of our proposed team include:

- Decades of Major Capital Project experience specifically as it relates to monitoring cost and schedule progress as well as to identify, assess and respond to project risks
- Vast experience in Government and Public sector as well as Infrastructure projects
- Deep knowledge of leading techniques in Project Controls for \$Multi-billion projects, including cost and schedule management and implementation of Earned Value Management Systems
- Access to our world-wide knowledge base as leading and active participants in its development specifically for this proposal

The team structure is depicted below:



Key Personnel

Core team

Below are the names and brief overviews of the EY team members who will be the primary core team to serve the Oversight Committee.

Name and Role	Overview
David Steele Local Engagement Partner	▶ David will the local engagement Partner who will work closely with the Executive Director and the Oversight Committee. David will be responsible for your overall client satisfaction.
Richard Noble Technical Partner	► Richard will provide technical leadership of the EY team will support the Oversight Committee in its communication with senior members of the Nalcor team and will be responsible for the technical aspects of the quality of service provided to the Client.
Emiliano Mancini - Project Controls Aman Gill - Contracts Mike Haycox - Risk Management Arun Ghosh - Technical Analyst	 Execution team will be responsible for execution and management of specific tasks of the assignment as follows: Emiliano holds relevant experience with Project Controls analysis specifically as it relates to monitoring cost and schedule progress as well as implementation of Earned Value Management System. This is a critical skillset required to support major capital project oversight. Aman is an experienced contract professional, who can participate on all aspects related to the contract management life-cycle focusing on contract risk and compliance. This is of particular importance for the Muskrat Falls Project and the contracting strategy it has chosen. Mike is an engineer with over 20 years of professional experience dealing with risk management, power and utilities and major capital projects. He is proficient at tracking overall project risks to ensure risks are properly identified, tracked, assessed and risk responses are planned Arun will support the EY team and the Oversight Committee in the analysis of various project data and the preparation of reports to the Oversight Committee.



CIMFP Exhibit P-03295 Additional Subject Matter Professionals

Below are the names and brief overviews of additional EY subject matter professionals who will assist the primary core team as required in serving the Oversight Committee:

Charles-Antoine St-Jean - Government and Public Sector Leader Tim Philpotts - Infrastructure Program Finance Andy Patterson - Power and Utilities, Major Capital Program Steven Carrol - Power and Utilities, Major Capital Program Hannah Green - Program Risk Subject Matter Resources	 Our Subject Matter Resources will bring their deep knowledge of Power and Utility Programs, Government and Public sector, Infrastructure Program Finance and major Project Risk. We would work with you to decide on the need for appropriate involvement of subject matter professionals outside our core team.
Additional Major Capital Project Resources	➤ To ensure sufficient capacity to undertake and deliver on work assignments, additional EY Major Capital Project Resources will be leveraged where required and involved in the Project as needed.

The matrix below illustrates the breadth of experience of our proposed team. Detailed resumes of the team members are included in Appendix A.

	Power and utility and infrastructure projects	Government and public sector experience	Project controls	Cost and schedule management	Earned value measurements	Risk management	Contract management	Project and construction management	Project governance
EY Core Team									
David Steele	x	x	X			x	x	X	X
Richard Noble	x	x	x	x	x	x	X	x	X
Emiliano Mancini	x	x	x	x	x	X	x	x	X
Aman Gill	x	x	x	x	x	x	x	x	X
Mike Haycox	x	x	x	x	x	X	x	x	X
Arun Ghosh	x	x	x	x	x	x	x	x	X
EY Advisory Board	t								
Tim Philpott	x	x	x			X	x	X	X
Charles-Antoine St-Jean	x	x	x			x	x	x	x
Hannah Green	x	x	x	x	X	x	x	x	X
Andy Patterson	x	x	x	x	x	x	x	x	X
Steven Carrol	x	x	x	x	x	x	x	x	x



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D. Resource Estimates & Fees

	Name	Position	Proposed Hourly Rate
Core Team	Richard Noble	Associate Partner	\$400
	David Steele	Partner	\$350
	Mike Haycox	Associate Partner	\$300
	Aman Gill	Senior Manager	\$275
	Emiliano Mancini	Manager	\$225
	Arun Ghosh	Senior Analyst	\$175
	Staff Level Analysts	Staff Analyst	\$100
Advisory Panel	Tim Phillpott	Partner	\$400
	Charles-Antoine St-Jean	Partner	\$400
	Hanna Green	Senior Manager	\$275
	Andy Patterson	Associate Partner	\$400
	Steven Carroll	Senior Manager	\$275
Generic Rates - additional resources	Atlantic Based Partner		\$350
	Atlantic Based Senior Manager		\$250
	Atlantic Based Manager		\$200
	Atlantic Based Senior		\$150
	Atlantic Based Staff		\$100
	National (non-Atlantic) Based Partner		\$400
	National (non-Atlantic) Based Senior Manager		\$275
	National (non-Atlantic) Based Manager		\$225
	National (non-Atlantic) Based Senior		\$175
	National (non-Atlantic) Based Staff		\$125

Rate assumptions:

- Fees are in CDN and are exclusive of travel and HST
- It is anticipated that an appropriate leverage model can be established for each of the agreed
 to work assignments which will provide the best value (and quantity of hours) to the Oversight
 Committee. We commit to senior resources being your main points of contact and participating
 in executive level analysis, quality review of analysis, and executive level discussions and
 meetings.

Travel requirements and associated costs are unknown at this time. They will be negotiated at
the time of each work assignment. It is important to note that most analysis can be performed
remotely, minimizing travel requirements. In addition to that, David Steele is your executive in
charge, works and lives in St. John's; therefore he can be available on a moment's notice to
attend any Oversight Committee or stakeholder meetings without the incurrence of travel
costs. This will be invaluable through the duration of this dynamic project.

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E. Our Approach

Our approach will leverage experience gained through our recent mandate to review and provide recommendations on the Government protocols for overseeing the Muskrat Falls Project.

You have noted that discrete and recurring work assignments will be established once this contract has been awarded. We look forward to working closely with you to co-develop the scope, effort estimates and expected deliverables for each need/ assignment that the Oversight Committee has.

We recognize the need to be flexible, as a variety of work assignments could be generated, including:

- General support
- Process and controls review
- Periodic and one-time cost and schedule analysis
- Targeted analysis
- Reporting assistance
- Deeper dive contract and performance reviews (significant contracts)
- Among many others

We recognize that your need for consulting assistance will vary and will evolve over the life of the contract, and we will therefore remain flexible and eager to address needs and opportunities as they arise.

Regardless of the work assignment, EY is confident that we can:

- Provide the depth of specialized insight and advice in the review and interpretation of cost and schedule information as well as the specific insight on major contracts and other project risks in support of the OC mandate.
- Establish a balanced approach to reporting. This will include a reporting rhythm that synchronizes with other reporting activities on the program. This will minimize unnecessary intrusion but also supports proactive insight as well as effective communication of the project status.
- Flexibly leverage EY's methodologies, tools and global knowledge capital as required in order to help the OC deliver the quality of oversight as committed by the Government to the people of Newfoundland and Labrador.

These components are further discussed in the following sections. We have also provided further details in the appendices of:

- Analytical techniques Appendix C
- Reporting formats Appendix B
- Quality management Appendix E

Fully covering the oversight committees mandate

EY will address the oversight committees mandate as follows:

▶ OC Mandate #1 - The project cost and schedule are well managed

As each work assignment will be co-developed with you, we do recommended that we consider an initial review of the Project's process and control environment within the first couple of reporting periods. This will confirm the extent to which existing project management processes, controls align with industry standards and leading practices.

However, this will extend beyond the generic Project Management Institute standards to include specifics for \$Multi-billion Major P&U programs as well as the integrity of the underlying data gathering systems, analysis performed and reporting.

This will give the OC assurance concerning the first line of defence for control project cost, schedule and risk. It will also provide further insight on the second line of defence provided by the other assurance activities on the program. This is an important consideration, as our prior exposure to the Project suggested that these assurance structures were not yet fully formed.

OC Mandate #2 - The project is meeting cost and schedule objectives

Since the OC's role is focused on the Project's cost and schedule, it is imperative that cost and schedule performance is effectively analyzed and monitored against the Project's baselines budget and plans and also that variances are rapidly identified. It is critical to identify early warnings and risks so that proactive options on corrective or mitigation action can be developed and the government's interests well managed.

Furthermore, the Committee will need to have an effective, informed and well substantiated dialogue with Nalcor. It will also need to ensure that suitable preparations can be made for communication of how the program is performing can be done. This is so that both the Government and the People of Newfoundland and Labrador are appropriately, positively and proactively informed.

In addition, EY will examine the outputs of the other assurance activities on the program (e.g. Independent Engineer, Nalcor IA, etc.) to cross refer, anticipate and/or verify cost and schedule performance. We will continue to work with the Oversight Committee to build on established controlled communication with these entities and so can again rapidly harmonize with /leverage these other oversight entities.

Details of the analytical techniques to be applied are captured in Appendix C.

OC Mandate #3 - The cost and schedule risks are being reasonably anticipated and managed

Effective risk management requires not only identification and appropriate management method selection. It needs an active risk culture that embeds the management action and reporting in day to day project activities and that also ensure there's appropriate use and deployment of contingency.

This doesn't happen by accident. The assessment of the risk management processes will be done as part of the initial assessment of process and controls. Furthermore, the Government of



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Newfoundland and Labrador will want to establish the appropriateness and tracking of the usage of cost and schedule contingency against risk and uncertainty as this directly impacts cost at completion of the initiative.

EY has specialists in its team on risk and contingency usage and is familiar with issues raised in prior EY and Independent Engineer reporting. As such, we are uniquely positioned to not only assure the processes and controls but also the impact on cost and schedule forecasting.

Details of the analytical techniques to be applied are captured in Appendix C.

Establishing a balanced effective reporting rhythm

We understand the imperative to minimize unnecessary intrusion / disruption into the Nalcor project but also support proactive insight as well as effective communication of the project status.

We anticipate that we would act as part of the Working Group level, working with Government's resource to support the Oversight Committee as shown below:

Oversight Committee

Committee members

- ► Clerk of the Executive Council (Chair)
- ▶ Deputy Minister of Finance
- ► Assistant Deputy minister of Finance
- ▶ Director of Debt Management
- Deputy Minister of Natural Resources
 Associate Deputy Minister of Natural
 Resources
- ► Assistant Deputy minister of Natural Resources
- ► Deputy Minister of Justice (or designate)

Roles and Responsibilities

- Review and approve periodic reports and communications
- ► Communicate and escalate high risks/issues as necessary
- ► Interact with Nalcor Senior Management
- ► Communicate and resolve issues
 - Provide input to Nalcor on Government requirements
 - Communicate with Cabinet and other stakeholders

Working Group

Members

Required skills to consider:

 Project Management 8, Controls, Engineering Management,
 Procurement/Contracts Management,
 Contract Risk, Construction Management,
 Internal Audit/ Assurance, Project
 Governance/Risk Management,

Roles and Responsibilities

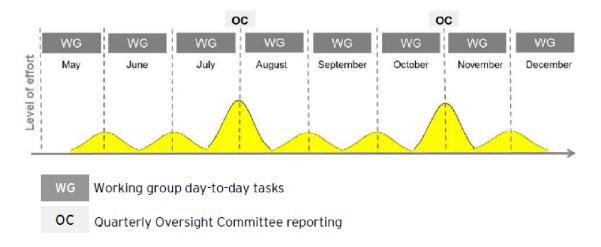
- Perform the analysis required to develop reporting and recommendations for the Oversight Committee
- Solicit additional inputs from Government entities and assurance providers as required
- Review reconciliation of funds disbursed for

Finance/Transactions project costs Liaise with Nalcor Internal Audit and other assurance providers to: Review outputs from project assurance activities Communicate oversight observations, input and recommendations Monitor critical corrective actions Support the Oversight Committee, communications to Cabinet and other stakeholders¹

Following an initial assessment of processes and controls, it is expected that a regular (quarterly) report will be submitted to the OC. The report will focus on project progress and performance with regard to scope, cost, schedule as well as risks and issues. Actual values (cost, schedule) will be compared to the Project's baselines to assess the speed the project is moving, whether project's milestones are being met and if corrective action is required.

It is envisaged that we will also provide monthly review and oversight activities to keep a proactive view on performance, risk and issues. This will use a sample of the same analytical techniques and an interim monthly update report direct to the oversight Committee.

This overall rhythm that synchronizes with Nalcor's own reporting rhythm would be as shown below.



Furthermore, EY is fully prepared to assist also in crafting the communications. This will include interpreting the information into usable language for the broader range of stakeholders. We have experience in using our communications resources.

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Leveraging EY's Major Projects Knowledge & Resources

Our service delivery will be tailored and adjusted, specifically to the needs of the Oversight Committee the working level team.

However, EY has invested heavily in developing its Major Capital Projects resources and these would be leveraged throughout the assignment.

This investment in resources has included pooling information based on standards and bodies of knowledge from work wide leaders in Project Management including:

- The Project Management Institute and its project and program management Bodies of Knowledge (PMBOKs) as well as Organizational Project Management Maturity Model (OPM3)
- The UK Office of Government Commerce (UK OGC) and its Prince2 and Project, Program & Portfolio Management Maturity Model (P3M3)
- The Australian Institute Project Management (AIPM) and its Knowledge Resource Centre (KRC)

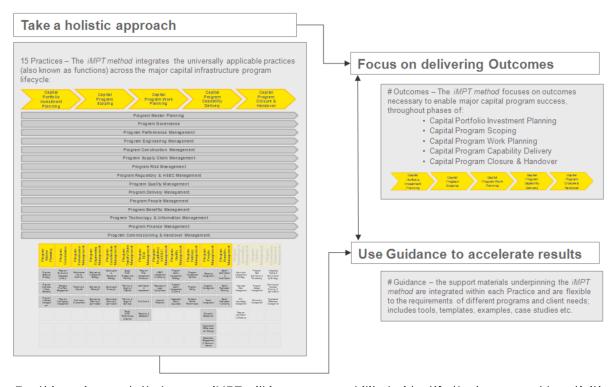
This, coupled with information generated during EY's leading world-wide service delivery on major projects like Muskrat Falls was then used as a basis of active, thorough design of our infrastructure Major Program Transformation (iMPT) service methods and tool set.

Phases	Capital Capital Portfolio Investment Planning Scoping Planning Capital Program Capability Capital Program Capability Capital Program Capability Closure & Handover
Practices	Program Master Planning
	Program Governance
	Program Performance Management
	Program Engineering Management
	Program Construction Management
	Program Supply Chain Management
	Program Risk Management
	Program Regulatory & HSEC Management
	Program Quality Management
	Program Delivery Management
	Program People Management
	Program Benefits Management
	Program Technology & Information Management
	Program Finance Management
	Program Commissioning & Handover Management

EY's iMPT framework

These tools are not used as a doctrinaire text book. Instead, they are used as a reference point for assessment and development of analytical techniques to be applied as well as the quality of recommendations we make. The focus of EY is on delivering the outcomes that the clients require.

EY's Focus on Outcomes



For this assignment, that means iMPT will increase our ability to identify the leverage-able activities of the Nalcor Project Controls team, the Independent Engineer, Nalcor Internal Audit to fit with the Oversight Committee's mandate and so help the OC deliver on its mandate for world class oversight.

This is further backed by the analytical techniques and quality management practice also defined in the appendices to yields strong insight, defendable results and practical recommendations.

EY will also ensure that active knowledge transfer occurs throughout the assignment to build the government's capability to undertake this and other oversight activities going forward.

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F. Overview of major project risks

The following chart provide an overview of the major risks surrounding key areas of Major Capital Project which need to be closely monitored and controlled during the life-cycle of the project.

1. Governance

- Inadequate owner procedures and controls for contractor oversight and risk management
- Reactive risk management
- Inadequate contract management skills
- Inadequate assurance mechanism
- Onerous contract terms & conditions
- Lack of nimbleness in decision making
- Inadequate document management

2. Scope and quality management

- Insufficient scope definition
- Quality of engineering (errors & omissions)
- Owner initiated scope changes
- Scope creep
- Inadequate quality management program

3. Cost management

- Earned value not tracked and applied to EAC
- Back charges, substitutions and non-conforming work not adequately tracked
- Cost reporting requirements not adequately defined in the contract
- Lack of proactive cost risk mitigation
- Inadequate visibility into contract level cost performance
- Delays in processing change orders

4. Schedule management

- ▶ Lack of an integrated and resource loaded schedule
- Errors in logic and sequencing of work
- Lack of rigor in updating and maintaining the schedules
- Inaccurate schedule forecasting
- Earned value not monitored and controlled
- Inadequate workface planning
- Lack of productivity monitoring
- Ownership of float not retained by owner
- Schedule reporting requirements not clearly defined in the contract
- Treatment of concurrent delays not defined in the contract
- Acceptable methods of time impact analysis not established

5. Claims management

- Lack of expertise in dealing with claims
- Change orders not categorized to identify back charges and/or potential claims

6. Other risks

- Contract performance reviews or other assurance mechanisms missing
- Absence of formal contract management and contract execution plans
- Weather conditions
- Inadequate/onerous technology/process controls
- Turnover of resources
- Poor information and document management to support staking/defending claims

This insight coupled with iMPTwould be used as part of the basis of assessment of detailed intrinsic risks in the project.

Specific risks would also be built into the assessment and EY has had particular success in contract risk assessment, contract compliance and most importantly, contractor performance analysis. It should be noted that this latter item is where the larger overruns in cost and schedule occur.

This would be a significant part of our analysis should we be selected.

APPENDIX A Detailed Team Bios

Core team



Richard Noble, MSc, DIC
Associate Partner, Advisory Services

Toronto
Tel. +1 (416) 943-3151
Email: richard.noble@ca.ey.com

Role - Technical Partner

Richard will provide technical leadership of the EY team, will support the OC Committee in its communication with senior members of the Nalcor team and will be responsible for the technical aspects of the quality of service provided to the Client.

Profile

- ▶ Richard leads Ernst and Young's Project Advisory Service group in Canada and brings more than 25 years of experience in high-profile projects across a variety of industries including notable assignments in the Power & Utilities (P&U) sector.
- Prior to his 16 years in consulting, Richard earned his "program management stripes" in the rigorous aerospace & defense industry where his clients included NASA and respective ministries of defence in the UK and Canada. Through this and his subsequent work, he has been a practitioner of advanced program and engineering management methods including systems engineering theory, stage gated design and earned value management for more than 18 years. These tools and techniques, are now translating into other industries including P&U world-wide.
- As a consultant, Richard has had particular success in deploying his advanced project management acumen in some major international initiatives at our top-tier clients. He has also shown particular versatility in managing, advising or providing assurance on both major engineering as well as corporate process improvement initiatives ranging in size from \$500K to projects in excess of \$48illion and project portfolios in excess of \$14Billion.
- His work spans Power & Utilities, Federal Government, Provincial government and other heavy industries. He is familiar with the Muskrat Falls project, the Oversight Committee and its key stakeholders.

Relevant experience

Richard has demonstrated a strong ability to advise on front-line management and assurance of major capital programs. Assignments that illustrate his ability to "do as well as review" have included:

Power & Utility Sector Major Program Management, Project Review & Assurance

- ▶ Bruce Power Various Project Audit, Governance, Control & Oversight Assignments
 - Richard has conducted multiple review and assurance assignments including:
 - Project Schedule Management Assessment including review of the processes, the reporting and the methods of driving contractor schedule performance through project control and contractual means. Specific schedule risks were identified and improvements to the management including Earned Value systems were proposed,
 - Procurement/Contract Management Audits and specific evaluation of contractors own management processes and reporting. This included assessment of contract structure, management, performance and compliance intercepting risks and savings in the tens of millions of dollars and months of schedule delays.
 - Program Management & Construction process upgrade program including improvements to the project engineering, construction and contracting processes.
 - Project Portfolio Management Processes including PMI Portfolio Management Body of Knowledge areas as well as gated lifecycle and funding approvals and alignment with business/operational planning across multiple business units.
 - Development of the Lessons Learned document for the \$4.5Billion Reactor Refurbishment program

Richard and his team were also used as trusted advisors in solving significant program management and contract issues and advising on related process improvements ranging from to negotiation management for contracts in the \$100s of millions through to project portfolio management.

- NB Power-Capital Governance Review
- ▶ Richard acted as an advising consultant on this assignment assessing the methods employed for key decision making on project spend and performance oversight. He introduced the appropriate standards as a reference base and directed the prioritization of the findings and recommendations.
- Local Distribution Companies (LDCs) and Ontario Energy Board (OEB) -Project Management Assurance
- Richard provided review and assurance services concerning a range of projects and their costs at LDCs across the province supporting rate applications. He also acted as Expert Witness to the OEB on the appropriateness (prudence) of project management processes and the project costs.
- ▶ BC Hydro -Program & Contract Management Framework

Richard constructed the Program & Contract Management Framework for BC Hydro as it embarked on the outsourcing of its business functions to Accenture Business Services. This leveraged the leading edge program management and contract management techniques to provide practical guidance and improvements in reporting for the BC Hydro executive.

Other Heavy Industry Major Program Oversight & Assurance Assignments

- Leading International Mining Company -Project Review & Assurance Richard led a program review for a \$3+Billion brown-field international mine development involving 3 major EPC contractors. He and his team were able to help intercept 20% overruns on schedule and cost as well as 8 months of unreported delays in engineering and construction. This leveraged an ability to interpret project data using his 18 years of Earned Value and other leading project management techniques.
- Leading International Mining Company -Program and Contract Reviews

 A leading European Potash and Rock Salt business had acquired a \$3.3Billion program to establish a green-field development in central Canada. As part of establishing their management framework, they contracted EY to review their proposed EPCM contract, review their project management framework, develop core contract management processes, develop the financial management framework and assess specific contract risks. Successful delivery on the first of these assignments led to Richard and his team acting as a strategic partner in building the organizations capability and significant follow on assignments to strengthen their organization. The work on this significant program continues.
- Leading Canadian Mining Company -Project Review and Risk Assessment

 A large Canadian based mining company was undertaking a \$200 Million pre-feasibility project as part of a \$7Billion mining a longer term international mine development program. Engaged by Internal Audit with reporting to the Board, Richard led a team of project management and mine development experts to assess the completeness and feasibility of existing plans as well as the accuracy of reporting of project completion status. Despite considerable push back from the project management group, Richard and his team identified significant delays and cost overruns as well as errors in estimation methods and project management processes. The findings indicating months of delays and \$hundreds of millions were verified and well supported leading to a significant re-planning of the initiative.
- Leading International Mining Company -Project Review & Assurance
 Our client was completing engineering and had launched construction of a \$2.5Billion new mine development targeted at reaffirming their global leadership in gold production. EY was engaged to assess progress and project management of the initiative. Richard and his team intercepted more than \$500Million in cost overruns as well as 6 months of schedule delays. They then provided recommendations to put the program back on track and improve overall project management including oversight of the major contractors.
- Leading Canadian Mining Company -Program Assurance Framework
 Our client was a leading low cost producer of Gold that was growing rapidly through a combination of exploration, Joint Ventures and acquisitions. EY was engaged to develop the project assurance framework for the organization whose portfolio of project spend was to be in excess of \$1Billion pa. A successful initial review of the organization's central project management framework and key

projects identified scope transfers, cost and schedule overruns as well as the need to strengthen risk and contingency management as well as management reporting.

- Large Energy Sector Client -Project Assurance & Pre-contract Due Diligence
 Richard managed a team of program management, controls and financial advisory experts on a
 project risk and proposal evaluation for a sole-sourced \$750Million refinery upgrade EPC project.
 The team identified \$3-5million in immediate savings and an additional 3% cost and 8% schedule
 risk to our clients above the management reserve. In addition, the team was able to develop a
 series of points for inclusion in the negotiation plans for subsequent phases of the program.
- Energy Pipeline Client project review and post mortems
 Richard led a multi-faceted team in the execution of a risk review of 5 EPC projects. They included assessment of practices used compared with corporate standards for engineering projects as well as related leading practices leveraging industry and technical specialist expertise. The strategically important report was well received by the board and the results incorporated into a major project management process overhaul.
- Leading Canadian EPC/EPCM Firm- project oversight and assurance framework

 The client has more than \$8Billion of program in execution at anyone time. Richard and his team were engaged to help develop the on-going review and assurance of these initiatives, many of which were being executed under fixed price terms. As part of the roll-out of the revised processes, a pilot project audit identified a more than 40% schedule overrun and 10% loss at completion at the 50% complete mark of the project. A corrective action program was recommended and put into action. Recent reports indicate that the slump in project performance has been arrested as a result.

Federal Government Major Program Management, Project Review & Assurance

- Commonwealth Government -Naval Engineering Program Risk Review
 Working for the procurement wing and the overarching program Oversight Secretariat, Richard led
 a team of Naval Engineering, Program Management and Government Procurement specialists in a
 broad-based review of the government and prime contractor participants management and
 oversight of their \$Multi-Billion ship design and construction program. He and his team were able
 to make well qualified recommendations to strengthen the management frameworks of both
 government oversight and its industry partner in the execution of this particularly high profile
 initiative.
- PWGSC & Canadian Department of National Defence -Contract Strategy Review The Canadian Government was considering a revised approach to procurement of its \$Multi-Billion, Maritime Helicopter Program, wherein the prime contractor would be a systems integration specialist rather than a more traditional model where the airframe supplier acts as prime and overall systems integrator.

The review assessed the risks associated with the planned procurement approach for this high profile multi-billion dollar aerospace project. Critical risks in the planned approach were highlighted as well as mitigating strategies for those risks.

PWGSC & Canadian Space Agency -MSS Systems Integration Program & Contract Management Richard was the program manager for the systems integration for the MSS, the \$1 Billion Canadian contribution to the International Space Station (ISS) program. In this role and as part of the Prime Contractor's team, he led the development of the verification and validation planning, negotiated the Integration, Test and certifications phases of the related contract with the Canadian Space Agency (CSA). He then led all systems integration through to successful contractual acceptance of the Canadarm II.

In addition, he was program manager for five systems development and contract teams in Toronto, Montreal, Halifax & Houston. He was also selected to represent the CSA in the related bi-lateral negotiations with NASA for participation in the Space Stations integration programs.

Provincial Government Program Review & Assurance

- Pontario Government -Review of Governance, Program & Project Management Practices
 Richard completed a 3 month assignment supporting the Ontario's Independent Task Force chaired by Denis Desautels (Ex Auditor General of Canada) as it reviewed and made recommendations concerning the major Project Governance & Procurement Management for the Province's Portfolio of projects. The work comprised developing both a report on related leading practices across multiple jurisdictions world-wide as well as a gap analysis of that provincial government's own project management framework compared with those leading practices. This leveraged a range of contacts and access to world-wide leading practices. The resulting report was been highly commended for contributing to the remediation of critical risks, root causes and gaps in the existing program and contract management frameworks in place which had previously precipitated \$ Multi-Million project failures.
- Ontario Ministry of Community & Social Services -Business Transformation Project
 Richard led a team working co-operatively with the ministry identifying the risks and management
 strategy for test and acceptance of this \$500 Million Common Purpose Procurement program. In
 addition to directing the test activity and Quality Assurance isolating and predicting key flaws,
 project risks and quality issues, he and his team provided a counter balance to the ministry's CPP
 partner through to the initial pilot deployment of the technology and revised processes.
- Ontario Integrated Justice Project -Project Risk/Contract Advisory Assignment Richard acted as the IT Program Management Specialist in a review of the completion status, risks, and project management processes on this hi-profile, \$100Million Common Purpose Procurement (CPP) program deploying technology across four stakeholder groups/ministries. The assignment provided the basis of the Ministry's negotiation position establishing risks and exposures for various scenarios and the best alternative to a negotiated agreement as it sought to exit the program.
- Nova Scotia Economic Development -Health Administrative Systems Program (HASP) Review Richard led a team of project management, IT and Health practitioners in a review of the governance and management processes as well as the accuracy of the reported status of the project. The results of the review which provided strong insight and advice were praised by the Government of Nova Scotia's Office of the Chief Information Officer and the members of the executive steering committee.

- ► TTC Review of their IFS Systems Implementation
 - Richard led a project review of this critical multi-phase, multi-year project that was central to the organization's operations and maintenance strategy. The review spanned project management, program management, quality management, data migration and the contractual relationships with third parties involved in the project. EY's work was commended for its balance as well as insight provided.
- Smart Systems for Health Agency (SSHA) -Operational Advisory Assignment Ontario As a result of significant and high profile internal and external reviews, the SSHA had identified the need for significant change to its core operations. Richard and his team were selected to complete a series of distinct assignments to help the agency effect a program of corrective action covering project management, IT management, quality assurance and other efficiency improvements. These helped pave the way to improvements in the SSHA's practices prior to its transition to becoming the Ontario eHealth organization.
- Capital Health Alberta -Project Management Reviews & Advisory Services
 Richard led a team conducting a review of the high profile Electronic Health Record project, helping
 the client intercept potential cost and schedule overruns, technical risks as well as business
 integration and deployment challenges. He and his team were subsequently engaged to provide
 advice on development of the PMO and specific enhancements to processes combined with
 selection of appropriate software to manage its portfolio of mission critical and business systems
 projects. Both assignments were well received by the client and contributed to the success of
 respective projects and the organization as a whole.

In addition to these assignments, he has successfully led and executed more than 60 other Program Management & Assurance assignments in other sectors including:

- Establishing Project Portfolio Management frameworks at leading clients
- Restructuring clients' portfolios of projects
- Establishing PMO's for large initiatives
- Project Recovery for failed or failing projects

He has also led the development and deployment of these services both for EY and previously at two of its competitors and is a key spokesman on Program Management representing the Canadian Firm in its related international steering groups.

- BSc (Hons) Aeronautics & Astronautics, University of Southampton, England
- MSc Control Systems, Imperial College, University of London, England
- ► Richard has completed the requirements for the designation of Chartered Engineer (C.Eng.) in the United Kingdom



David Steele
Partner, Advisory Services

St. John's Tel. +1 (709) 570 8264 Email: david.steele@ca.ey.com

Role - Local Engagement Partner

As EY's Newfoundland and Labrador's consulting practice lead, David will be responsible for the overall service delivery and your satisfaction. David has performed this same role with several strategic mandates with the Government of Newfoundland and Labrador in the past, and has proven himself as a reliable service provider and leader to the Province. David will ensure the successful outcome of this project.

Profile

David is a Partner in EY Advisory Services practice in Atlantic Canada and is the consulting lead for Newfoundland and Labrador. He has 13 years of professional experience, providing strategic advice to leaders in both public and private sectors. David focuses on providing advice to clients on program, process and policy improvements which help organizations achieve their strategic objectives.

Relevant Experience

- Government of Newfoundland and Labrador Natural Resources Lower Churchill Project
 Oversight Protocol
 - David was the project leader who led a team of experts to conduct analysis and provide recommendations to Natural Resources and the Oversight Committee with regard to oversight protocol and information requests. David was the main point of contact who personally oversaw resource deployment and was responsible for overall client satisfaction.
- Government of Newfoundland and Labrador Executive Council Core Mandate Analysis
 Project leader responsible for planning and directing EY resources through program initiation,
 process set up, proposal preparation and evaluation, and program prioritization. David coordinated the involvement of over 20 EY subject matter experts from around the globe to support
 this project. To demonstrate David's reach, EY representatives from Australia were brought to
 bring subject matter expertise to a series of social sector workshops.
- Multiple Energy Sector clients
 - Over the past 8 years, David has led multiple IT governance and control assessments for energy sector clients in Canada and the US. This has included security and operations focus for metering, billing and financial systems.
- ► Large Oil and Gas Client (Atlantic Canada) Project Oversight Quality Review

 David was the project management advisor to deliver project Quality Review assessments of the implementation of Oracle Human Resources Management System. The Quality Review was

designed to evaluate the overall state of a project and fast track it back to health by providing recommendations for improvement, and recommended actions for project recovery and/or rescue, thus reducing project risk. The Quality Review focused on non-technical risks related to project approach, planning, organization, project performance measurement, communications, resources, etc. EY provided guidance and recommendations around balancing competing demands for quality and scope, time and cost, and adapting the specifications, plans and approach to different concerns and expectations of various stakeholders. We also supported the Project Management Offices throughout the engagement providing services aimed at fostering the PMO discipline and introducing standardized project management practices. We reviewed and assessed project documentation, deliverables, data conversion/ validation, user acceptance testing and other various stage gate criteria to determine project readiness to move to the next phase of the project.

- David participated on the team who conducted an independent quality review of the SAP HR/Pay project. For this evaluation we: reviewed project governance; reviewed key project management documentation (charter, plans, etc.); conducted a review of the deployment plans and milestone documents; conducted a review of progress made against these plans along with strategies for closing schedule gaps to make a preliminary determination of the likelihood of achieving the milestones as defined; reviewed and assessed Go/No Go Criteria; assessed organizational readiness; and reviewed test strategies and results. Ernst & Young identified and reported key risks related to scheduled go-live date and provided recommendations for risk mitigation strategies.
- David led a project where EY conducted an external Quality Review that focused on the following areas: Review of project deliverables, project governance, project management processes, and organizational change readiness. Ernst & Young worked closely with the project team to complete the assessment. Scope was managed appropriately and the project was delivered on time and on budget. A risk report was issued to the client outlining several risks and recommendations for consideration. The risk report was presented to the Strategic Leadership Team.
- Government of Newfoundland and Labrador Child Youth and Family Services
 David was the project leader for multiple projects involving Canadian-wide jurisdictional scans.
 David's team analyzed the data and information gathered, and provided a prioritized set of recommendations to CYFS in relation to their policy design and implementation.
- A large educational institution in Atlantic Canada

 David led a team who conducted a global jurisdictional scanning project and prepared an analysis and set of recommendations to their client. David leveraged EY's global network to include over 30 data points for the study.
- Multiple public and private sector clients David has conducted many research, analysis and recommendation based assignments over his career.

- > 2001 Memorial University of Newfoundland, B.Comm
- ▶ 2003 Canadian Institute of Chartered accountants, Chartered Accountant



Mike Haycox, P. Eng, MBA
Associate Partner, Advisory Services

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Role - Risk Management Lead

Profile

Mike Haycox is Associate Partner in the Advisory Services practice of Ernst & Young LLP. He has 27 years of experience in industry. For the past 15 years, he has advised energy and manufacturing companies in improving the performance of critical projects, and operational and executive processes. He has worked with Executives and Boards to create and deploy business plans and identify risk.

Mike is Ernst & Young's Energy, Power and Utilities champion for the Atlantic Canada region and a member of the Board of the Atlantica Centre of Energy. He has spoken at several conferences on the energy industry in Atlantic Canada and the impact of risk on major project investment.

Relevant experience

- ► Led a team that assessed and reviewed construction supplier contract risks to identify opportunities to recover invoice overpayments. This led to millions of dollars of actual cost recoveries.
- ► For a major \$1.4 million nuclear station refurbishment project:
 - Assisted the client in identifying major project risks, modeled their financial impact, and assisted in developing management plans, reporting protocols, and monitoring activities.
 - Led the long-term monitored of the financial performance and broader corporate risks
- Performed an assessment of the project management processes for the \$850 million refurbishment of a thermal power station.
- Delivered project risk assessments for a variety of projects that included the construction of a Utility's major Transmission Tie-line and other IT and capital projects.
- Was engaged as an expert witness at an Energy and Utility Board Hearing to support a utilities case for permitting expenditures for a major capital project
- Led Regional Energy and Economic Development Leadership forums in advancing major initiatives and improving the regional investment climate
- ▶ Delivered a number of enterprise risk assessment (ERA) engagements in a variety of industries including Utility, Oil and Gas, Retail, Health Care and diversified Industrial Products. These projects established client's risk appetite, and identified and assessed the major risks to their business.
- Performed comprehensive company-wide assessments or diagnostics for a number of companies across a variety of industries including electrical utilities, manufacturing, food processing, and

natural gas production. The assessments covered major business processes such as strategy setting, human resources, information technology, marketing and sales, supply chain, production, new product introduction, and finance. Identified business improvement opportunities and recommendations to realize the opportunities.

- Performed assessments and reviews of high-value processes within energy companies to focus the organization on critical issues and leading practices. This included:
 - High profile strategic areas such as investment portfolio management, major transformation projects, and capital programs.
 - Key revenue producing processes such as power marketing and major operational areas including plant reliability, operations, maintenance, and procurement.
- Project managed and facilitated a number of client engagements with cross-functional teams to solve organizational problems and drive performance within generation plant design and maintenance processes, electrical distribution capitalization and planning processes, transmission maintenance processes, and counterparty risk processes.
- Worked with senior executives to develop medium and long-term business visions, strategies and plans and established balanced scorecard indicators to measure success of the strategy.
- Drove the development of an Integrated Quality Management System for a Nuclear Generation Facility that defines the major processes of the organization and how they interact to provide organizational control and improvement. As well, assessed the Quality Management System of an off-shore energy regulator.

- Mount Allison University, BSc, 1983
- Technical University of Nova Scotia, B. Eng., 1985
- Dalhousie University, MBA, 1992
- Professional Engineer (P. Eng.), 1987
- Certified Management Consultant (CMC), 2001



Emiliano Mancini, PMP Manager, Advisory Service

Toronto

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Role - Project Controls Lead

Profile

- Emiliano is a Manager in the Major Capital Projects team based in Toronto. He has over 10 years of industry and consulting experience in over \$30 billion of construction projects spanning across Canada, Europe and North Africa. He has worked on many high profile projects in various industries.
- He has advised clients in both public and private sector for creating operational efficiencies, reducing costs and business risks surrounding their major construction projects.
- Emiliano has led initiatives to improve project control and project management practices on major capital projects/programs. He has proficient skills in risk management and contingency planning.
- Emiliano's vast experience brings leading practices, and a deep understand of processes, quality and controls surrounding major capital programs and projects. He speaks fluently English, French and Italian.

Relevant Experience

Nuclear Power Company, Ontario

Advised on identifying risks, strength and weaknesses of the Project Management and Construction organization for achieving future target state. Reviewed program and project governance, project management processes, projects controls from end-to-end. Provided value-added recommendations around project and program management frameworks with focus on processes, system and people as well as performance and organization effectiveness.

▶ Global Mining Company in Saskatchewan

Assisted the client developing project management plan, project controls, work breakdown structure and project schedule to manage the transition from the construction to the operations phase of the mine.

Global Mining company, Saskatchewan

Advised on developing project controls and project management processes for a multibillion dollar mining project. Focused on procurement management. Provided strategic directions for sourcing and negotiating of key contracts; developed tools and procedures for monitoring and controlling project performances; identified project risks and advised on mitigation actions.

Global Mining Company, Ontario

Advised on reviewing major design and construction contracts for mining projects across the globe. Identified contract risks and areas of improvement; recommended corrective actions, cost recovery and contract improvement opportunities. Advised on project management and project control processes.

▶ Global Oil & Gas leaders, North America and Europe

Assisted on delivering multi-year programs for the construction of country-wide petrol station networks. Supported the client in managing multimillion dollars contracts, implementing project management and project control techniques and monitoring project performances.

► Global Real Estate investor, Morocco

Assisted on developing project management processes and project controls for the construction of a multibillion dollar coastal resort which included design and construction of infrastructure and services, hotels, luxury villas, 18 holes golf course and marine attractions. Assisted sourcing and managing key contract packages; developed tools and procedure to monitor and control project performances.

Major Telecommunication Company, Morocco

Supported the client with the development and construction of their new headquarters in Rabat, a 20-storey office including a 600 places auditorium and a 4 levels underground parking. Focused on project control environment and in monitoring project performances to guarantee budget, schedule, quality, design standards and safety targets were met.

International Real Estate companies, Europe

Assisted the clients in managing multimillion dollars refurbishment works at their properties, which included luxury residential buildings and 5 stars hotels. Dealt with top players of the hospitality and luxury industries and supported the client in managing EPCM contracts through the project lifecycle and implementing best practices to improve project performances.

Government Transportation Company, Ontario

End-to-end review of ERP system implementation. Focus on project and risk management processes as well as quality assurance and quality control.

Global Banking company, Europe

Advised on implementing brand transformation and managing major refurbishment works at their branches.

Conducted technical, environmental and financial audits for blue-chip clients as part of the process for the acquisition of new assets and/or companies.

- BSc. Civil Engineering
- Project Management Professional (PMP) certified
- Member of the Project Management Institute (PMI)
- Member of the Professional Engineers Institution (Italy)



Aman Gill, PMP, LEED AP
Senior Manager, Advisory Services

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Role - Contract Management Lead

Profile

- Aman has over 15 years of experience covering more than \$60B of major projects across public and private sector. In the public sector, he has advised municipal, provincial and federal agencies on large multi-stakeholder projects
- In addition to designing and building projects in North America and Asia, Aman has developed and deployed governance and oversight models, processes and tools for managing complex engineering, procurement and construction programs
- Aman brings a deep knowledge of project management controls and governance models to effectively manage risks in multi-billion dollar initiatives. His approach is rooted in integrating the people, process and technology to maximize organizational effectiveness
- Aman is considered a subject matter resource for sourcing and managing engineering and construction contracts across their full lifecycle. His experience in this area includes leading the supply chain team for a \$4B project.
- His utilities and public sector clients include NB Power, Bruce Power, Metrolinx, Department of Transportation, LAPD, Department of Transportation - Aviation

Relevant Experience

- Advised a major utility client in Atlantic Canada to improve visibility into project performance for their portfolio of over 250 projects with an annual spend exceeding \$300M. The recommendations included monitoring and reporting the cost, schedule and contingency performance. Aman also benchmarked other utilities to identify best practices in capital allocation and performance.
- Provided advice to develop the framework for a provincial government's oversight of a \$7B multistakeholder power project. The oversight committee made of senior bureaucrats, reported directly to the cabinet and the Premier. Skills in project management, contract management, construction management, project controls, internal audit and risk management were leveraged to design a cohesive oversight framework
- Advised a nuclear energy company on their commercial strategy for sourcing and managing construction work; identified areas of risk in the commercial strategy and the contract management process. Aman also advised this client on correcting the course of multiple high risk projects by identifying root cause performance issues in their project portfolio.
- Aman has successfully managed the commercial department for a \$4.5Billion engineering program, in Western Canada. Aman developed the sourcing strategy for this project and negotiated multiple engineering and construction contracts. He integrated concepts such as early contractor

- engagement and pre-fabrication to optimize project design and delivery. Aman developed controls to manage contract cost, schedule and change management to minimize execution risk.
- Led the gap analysis of project management and controls for a Canadian regional transit company. Gaps in monitoring and reporting of project cost and schedule and corresponding root causes related to people, process and technology were identified along with remedial actions.
- Set up the policies, procedures and controls for two multi-billion dollar greenfield mining project in Western Canada. Among other project management areas, Aman led the development of policies and procedures for procurement planning and forecasting, supplier pre-qualification, sourcing, contract management, change management, claims management and contract close-out.
- Conducted a gap analysis of the project management framework for a leading global mining company. This assessment covered projects across multiple sites in Canada. Aman examined the cost, schedule, quality, scope, procurement, communication and risk management processes to identify and prioritize the gaps and improve efficiency.
- Negotiated over 200 change orders for a \$9B project and closed out over 20 major construction contracts by reconciling subcontractor costs and identifying opportunities for back charges and claims. Assisted the client in determining whether the costs charged were properly supported and allowable under the terms of the executed contract and subsequent change orders. Identified contractually unallowable charges and cost recovery opportunities worth \$15M for the Owner.

- Master of Architecture
- Bachelor of Architecture
- MBA Coursework
- Certificate in Real Estate Development
- Project Management Professional (PMP) certified
- LEED Accredited Professional
- Registered Architect (India)



Arun Ghosh, BSc Senior Analyst, Advisory Services

Toronto

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Role - Senior Analyst

Profile

- Mr. Ghosh is a senior analyst with EY's Performance Improvement group in their Major Capital Programs team. His core competencies are in Program and Project Management for infrastructure projects. During his time at Ernst & Young (in the US and Canada), Arun has served several multibillion dollar Clients in mining, power (nuclear) and utilities and oil and gas.
- Arun has nine years of industry experience specializing in program/project management (governance and controls), procurement process evaluations, scheduling assessments, cost estimating and forecasting, contractual risk assessments, contract compliances, operational realignment, project risk assessments, litigation support and scope/change management.
- ► He has performed several strategic improvements relating to construction program management, redesign of program/project management structures, risk management and reporting.
- Prior to working with Ernst & Young, Arun was employed by Turner Construction, a Global leader in Construction Management, for 3 years as an Assistant Project Engineer/Field Engineer. During this time, he assisted in the management of a \$100 million high rise office complex and a \$110 million hospital extension.

Relevant experience

- Currently assisting in delivering PMO services for the transition of a \$1.2Bn IT services program. The Client is undergoing a major shift in their IT services framework (managed by HP) and Arun is functioning as the PMO to manage the client's transition to the new model. The transition focuses on 4 major areas spanning from Enterprise Service Management, End User Computing, Hosting services (servers, hardware and software) and Change Management services.
- Performed contract reviews on 2 multi-million dollar contracts for a \$1bn mine and a claims review on one of the contracts. The contract reviews focused on evaluating cost compliance against the terms and condition of the contract and identifying cost recovery opportunities. In addition to the contract reviews, Arun evaluated a \$10mn claim against the Client and identified up to \$3mn of deductions to the claim. In addition to the deduction, Arun also helped identify counter claim opportunities in favour of the Client.
- Global mining company in Saskatchewan. Organizational assessment of the program management function

Performed a program management and governance assessment for a \$4B mining facility. During the design phase of the mining plant, the Client experienced budget and schedule growth by twice

the baseline resulting in a thorough overhaul of the program management and governance framework. Arun evaluated the re-designed integrated program management and governance framework (including design engineers, construction managers, etc.) to identify potential exposure with the program, reporting, risk management, stakeholder and steering committee management and general project controls. Arun helped identify risk and recommended remediation to minimize the Clients exposure on the project.

- Nuclear power company in Ontario. Evaluation of the Project Management and Construction function
 - Performed a detailed evaluation of the Project Management and Construction (PMC) function (\$200Mn+ yearly spend) and identified strengths, weaknesses, risks and improvement opportunities. During this evaluation, Arun evaluated the governance structure, existing processes and controls (spanning the project lifecycle) and integration & interdependencies of all cross functional groups namely engineering/design, procurement, finance, IT, HR/resource management, etc. Arun's evaluation let to multiple recommendations that resulted in the restructuring of the Clients PMC function and helped investor confidence. This work has led to further restructuring implementations by EY and has helped the Client gain much needed addition funding (in billions of \$'s) for plant expansions.
- Nuclear power company in Ontario. Business case evaluations for a single entity spend model
 Analyzed the existing business case for their single entity spend model and recreated a new
 business case for one of the world's largest Nuclear power plant (located in Ontario) to achieve a
 single entity spend model to procuring trades for construction projects. As part of this evaluation,
 Arun evaluated the current state business model and the program/project management
 governance and controls of the Client as well as one of their major sole sourced Contractors to
 understand efficiency / optimization of project delivery, delivery of intended benefits and identify
 areas of improvement in the contracting strategy to obtain optimum financial and performance
 efficiency for both parties. This evaluation resulted in the creation of a new business case for the
 single entity spend model with stronger processes and controls, in line with the Clients business
 plan.
- Metrolinx. Assessment of the Project Management Controls framework
 Managed a project controls improvement initiative by documenting the existing controls based on a
 series of structured interviews and document reviews, performing select project walk-throughs on
 the existing controls and testing a sample of projects for compliance with the controls. In addition
 to the output of the evaluation, the team utilized industry leading practises and the Client's risk
 profile to make recommendations for improvements in the controls environment (including a
 roadmap for implementation). This initiative not only helped the Client identify strengths in their
 controls environment and the overall assurance program, but also identify and strategize much
 needed improvements to strengthen their controls.
- MGM Resorts International. Multiple phases Project cost forecasting, change management, financial reconciliations and litigation support

 Provided MGM Resorts International with Project Management Oversight focusing on cost forecasting, expedited Change Order Resolution, Financial Closeout services and litigation support on their multiuse \$7 billion hotel, resort and casino. The first phase involved a complete revaluation and risk assessment of their construction spend and forecasted budget that enabled the Owner in making key strategic decision on the future of the project. Arun assisted with cost, change order and claim evaluations. He managed individual Owner/Contractor/Consultant Change

Order Resolution and Closeout teams, set direction and identified process improvements. Arun prepared documentation of the change order resolution and closeout processes and developed executive reports on a weekly basis. He facilitated the finalization of change orders, risk mitigation, and contractual clean-up of the financial situation. This resulted in significant cost savings to the Owner and Arun further assisted the Owner in providing a budget forecast and risk analysis report to their Board of Directors. The Ernst & Young team helped the Client identify approximately \$150 million in cost savings.

Cosmopolitan Hotel and Resorts. Budget forecasting and PMO Performed project budget forecasting to establish the optimal completion scenario for the \$4B gaming and hospitality asset that the Client foreclosed on. Established and operated the PMO to provide independent third party oversight, direction, and management via metrics of the project. This helped the Client achieve phased project completion, thus maximizing valuation and balancing cash flows.

- BSc Electrical Engineering, Pennsylvania State University, USA
- Member of the Project Management Institute

Advisory Board



Charles-Antoine St-Jean
Managing Partner
National Government and Public Sector

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Role - Subject Matter Resource Advisor, Government and Public Sector

Profile

Charles-Antoine has over 35 years of experience providing financial management, strategic and governance advice to the most senior levels of public and private sector organizations, in Canada and abroad. In his current role with EY, he leads the national government and public sector practice, including infrastructure and assurance, serves as engagement partner on strategic governance related projects in public sector, and conducts QA reviews of selected projects across the country.

He returned EY in 2007 to assume his current role after serving as Comptroller General of Canada. Earlier in his career, he was seconded twice for close to 4 years to serve in senior financial officer roles with large Crown Corporations.

He is a Fellow of both the Quebec and Ontario Institute of Certified Professional Accountants, a fellow member of the UK Certified Professional Finance and Accountancy Institute and a former President of the CCCAF, a Canadian not for profit organization dedicated to public sector governance improvement. He is a former board member of the Canadian Public Sector Accounting Board and currently serves on advisory board of various public organizations. He is a governor of the University of Ottawa, chair of the audit committee and member of the executive and governance committees. He has served at numerous times as board members for a number of not-for profit organizations.

Relevant experience

► Engagement partner- Large Federal Crown Corporation (Confidential - still under Cabinet Confidence). Capital and Operational Review (2011, 2012 and 2014)

For Finance Canada, led three different projects which included developing a number of options to explore different ownership models (including shared governance with other level of governments, private sector operators, and investment funds), various levels of operations and reach. Complementing the options analysis were a top to bottom review of all operations of the two organizations, to identify efficiencies, cost savings, and opportunities to leverage extensive capital infrastructure to generate more revenues International benchmarking of similar operations, identification of new and technologies use by international operators was also a key element of review. Methodology includes use of international panel of experts to confirm feasibility options.

All three reviews were conducted with an accelerated pace to meet the Minister of Finance Budget timeline. Multi-disciplinary team of 10 people included process engineers, economists, financial advisors, industry specialists, technology advisors and people/organization/change management advisors.

- Comptroller General of Canada (2004 2007)
 - As the most senior financial officer of Government of Canada, reviewed, challenged and signed off of all significant federal government Treasury Board Submissions involving financial calls on national fiscal framework. Projects ranged from multi-billion dollars infrastructure projects to new grants and contribution programs. As Comptroller General, advised Privy Council, President of Treasury Board and Treasury Board Ministers of risks and control frameworks, status of most significant capital projects, and interfaced with Auditor General Office to manage issues and concerns. Regularly presented and appeared as witness at Public Accounts Committee and Senate Finance Committee.
- General Manager, Corporate Investment, Canada Post Corporation (1994-1996)
 As General Manger, Corporate investment, Capital Investment with Canada Post Corporation,
 designed, implemented and ran new corporate investment process to manage over \$350 M/year of
 investment, dealing with portfolio of over 40 on-going projects. First year implementation resulted
 in a one-time savings of over \$50M. Process and protocol were subsequently shared and
 implemented with large Canadian corporate companies as best in class.

Education and professional qualification and accreditation

Bachelor of Commerce, Ottawa University



Tim Philpotts
Partner and Senior Vice President
Structured Finance

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Role - Subject Matter Resource Advisor, Infrastructure Program Finance

Profile

Tim Philpotts is a Senior Vice President of E&Y and National head of the firm's project finance group. Tim re-joined E&Y from industry where he led the formation of a \$105 million infrastructure fund focussed on capital infrastructure projects.

Tim is recognized nationally as the leading financial advisor on capital infrastructure transactions and has performed the lead role on many projects. Tim has been involved in infrastructure work for more than 15 years and has advised on over 50 projects with total capital value of over \$25 billion that have reached financial close. He has advised Partnerships BC, SaskBuilds and Infrastructure Ontario on many of their pathfinder transactions. Tim has worked extensively on a diverse array of projects, including numerous energy, accommodation, and transportation projects including recently advising BC Hydro on the John Hart Renewal Project, a \$1bn hydro project, and Urbaser on the City of Surrey Biofuel Project.

Relevant Experience

- Regina By-Pass advisor to SaskBuilds on the \$1bn bypass project
- ▶ 407 East Completion Phase 2 Advisor to Infrastructure Ontario on the procurement of the Phase 2 of the 407 East Completion project a \$1bn expansion to the toll highway in Ontario
- Sea to Sky Highway Project Financial advisor to PBC on the procurement under a Design-Build-Finance-Operate-Maintain transaction for the Sea-to-Sky Highway Improvement Project, a \$600 million highway redevelopment project for the 2010 Winter Olympic Games. The role included development of the business model for the project including a highly innovative and financially efficient payment mechanism, negotiation of the concession agreement, evaluation of the financial aspects of the proposals, shadow pricing of financial derivatives, assisting in drafting of the procurement documents (RFQ/REI, RFP, etc)
- Anthony Henday Drive -Advised private consortium Berger on the procurement through P3 of a \$300m Anthony Henday Drive highway project in Alberta
- ▶ Golden Ears Bridge Project -Advised private sector consortium on the negotiations of the concession agreement of the Golden Ears Bridge Project in Vancouver
- Provided specialist transportation advice on the financial review of the winning bids for two major toll highway concession projects in the US
- Advised the Port Authority of New York and New Jersey on the potential for obtaining private sector investment in a number of key infrastructure upgrades including bridge and airport projects

- Advised the Bay Area Rapid Transit Authority on the procurement of the Oakland Airport Connector Project
- > Advised the sponsor on the potential rapid transit project servicing Oakland Pennsylvania
- Undertook extensive due diligence on the potential acquisition of a package of two highway projects by the Concert Infrastructure Fund
- Kicking Horse Canyon -Financial advisor to the winning private sector consortium for the Kicking Horse Canyon Project Phase II to upgrade a portion of the Trans-Canada Highway in Kicking Horse Pass. His role included development of a detailed financial model for the project, developing the financial structure of the SPV including liaising with credit rating agencies to make sure the project was correctly, developing an information memorandum, running a financial competition, raising the required funding for the project, managing the pricing of the project, leading negotiations with both the Province of BC as well as with the finance providers
- Richmond Airport Vancouver Project -Advisor to a private sector consortium on a \$1.5 billion project to construct a rapid transit link between Richmond airport and Vancouver. His role included developing financial structure for the project, development of an information memorandum, running a finance competition, developing a detailed financial model, liaising with credit rating agencies, and negotiating of concession and other agreements
- Dawson City Bridge Advised Partnerships British Columbia on the options for procuring a new bridge in Dawson City
- New Brunswick Highway Advised on the C\$1bn New Brunswick Highway road restructuring project in Canada. The work has involved advising on financial structuring, toll structures, and alternative methods for structuring payments from the Government as well as financial modelling and accounting matters. The project refinanced and closed in 2000.
- Quebec government Advised on the development of a number of service stations in Quebec.
- Okanagan Lake Bridge project Led the peer review for the BC Ministry of Transportation and Partnerships British Columbia
- Northern Link specialist advisor to the Queensland Government on the shadow tolling structure for the Northern Link project
- National Assembly for Wales Acted as the lead advisors to the National Assembly for Wales on the £120m A55 - Llandegai to Holyhead DBFO project. The project reached financial close in December 1998.
- Advised the National Assembly for Wales on the proposed development of the A465 'Heads of the Valleys' road. Our work involved providing advice on the affordability and value for money issues of the project
- Autolink A19 Advised Autolink on the refinancing of one of the first Highways Agency road DBFO projects. The refinancing reached financial close in 2001
- ► English Partnerships Advised English Partnerships on the proposed three new crossings of the Thames in the Thames Gateway area. The project is between £500-1,000m and our work has involved providing financial advice on the procurement and finance issues

- ► Transport For London Advised Transport for London on the options for A13 in the Thames Gateway
- National Assembly for Wales Advised the National Assembly for Wales on the M4 Relief Road. Our work has involved identifying options for funding the project and modelling the potential funding solutions, including tolling, road congestion charging, parking levies and other sources of funding
- National Assembly for Wales Advised the National Assembly for Wales on the proposed development of the A465 'Heads of the Valleys' road. Our work has involved providing advice on the affordability and value for money issues of the project
- Caerphilly County Borough Council Street lighting Advised the Council on the options for contracting out their street lighting. This involved a detailed appraisal of the various procurement options from a financial and commercial perspective
- Waterford By-Pass Advised a consortium of Hochtief, Intertoll, Morrisons, O'Rouke and Barclays Private Equity on the Waterford By-Pass, a Euro 300m real toll road DBFO project in Ireland, and the the Dundalk By-Pass, a Euro 100m real toll road DBFO project in Ireland
- Dundalk By Pass Advised a consortium of Hochtief, Intertoll, Morrisons, O'Rouke and Barclays Private Equity on the Dundalk By-Pass, a Euro 100m real toll road DBFO project in Ireland
- Norwegian Government Advised the Norwegian Government on their PPP roads programme. The work has involved advising on the first two roads under PPP, the NOK 1,250m E39 Klett to Baardshaug and the NOK 1,250m E39 Lyngdal to Flekkefjord. The first of these projects is currently in procurement. The assignment has involved advising the Government on the procurement strategy, developing a payment mechanism, drafting of the tender documents and advising on risk and legal issue
- ▶ A92 Advised a consortium on Morrisons and Mowlem on the £50m A92 road project in Scotland
- ▶ M77 / GOS Advised a consortium of AMEC, Morrisons and Barlcays on the £160m PPP road scheme in Scotland
- Caerphilly County Borough Council Advised Caerphilly County Borough Council on the £35m
 Sirhowy Enterprise Way
- Dorset County Council Advised Dorset County Council on the on Weymouth Transportation and Regeneration Plan, which includes the A354 Weymouth Relief road
- Devon County Council Advised the Council on the feasibility of Barnstaple Western By-Pass project, a £50m DBFO project
- ▶ John Hart Replacement Project Financial Advisor to PBC and BC Hydro on the \$1.0bn replacement of the John Hart Regeneration Project on Vancouver Island. The project will be the first hydro PPP project
- Surrey Biofuels advisor to the City of Surrey on the business case for a biofuel processing facility
- Urbaser SA advisor to Urbaser on the financing of a biofuel facility for the City of Surrey
- Capital Regional District Water Project Advisory to the CRD for the \$1bn waste treatment and biosolids facility for the CRD region in BC
- RMWB District energy advisor to RMWB on a district energy project for Fort McMurray

- ▶ Advised Tourism BC on the potential new Convention Centre in Surrey BC
- ► Holsworthy Biogas Project Advised the Trustees of the first commercial biogas plant in the UK. The project reached financial closed in 2001 and has recently started producing electricity

- ► FINRA Series 7 & 63
- Fellow of Institute of Chartered Accountants in England and Wales, 2009
- ▶ Bachelor of Science, University of Exeter, 1989



Steve Carroll, CCP, PMP, PSP
Senior Manager, Construction Advisory

Philadelphia

Tel. +1 (215) 448 5506 Email: steve.carroll@ey.com

Role - Subject Matter Resource Advisor, Power and Utilities Programs

Profile

- Steve is a Senior Manager in EY's Construction & Real Estate Advisory Services practice and has more than 13 years of experience in construction advisory and project controls.
- Steve has managed or participated in more than 75 construction industry consulting engagements. He focuses on the development and assessment of capital project governance and control frameworks, risk management, process improvement, cost management, scheduling, quality assurance, contracts and procurement. He is experienced in construction claims analysis and dispute resolution services, including the preparation of expert reports and litigation support.

Relevant Experience

- Steve coordinated construction internal audits at a power facility in the southeast including assessments of the risk management program, project execution plan, contract strategy, subcontract flowdown compliance, the change evaluation process, contract administration, time and material expenditures, vendor quality, budget and cost management, information management and integration management.
- Steve managed a construction controls and related anti-fraud controls assessment for a multi-billion dollar utility construction program in the Northeast and presented as a witness at a New York Public Service Commission technical conference.
- Steve coordinated quality assurance, safety, and project control audits and a startup/turnover readiness assessment on a \$1.2b environmental retrofit/scrubber project on a coal fired power plant in the Midwestern United States.
- Steve is managing a construction applications portfolio assessment for a major northeast utility and developing a five year technology roadmap for construction management systems.
- Steve developed a project management manual for a southeastern United States utility that provided guidance on the development of a project execution plan for their major capital projects.
- Steve managed internal audits of the contractor payment process and construction cost estimating accuracy as it relates to unit based distribution line construction contracts for a northeast United States utility. This estimating process review included an evaluation of the current state policy and procedures around the constructability review process.
- Steve was the lead construction subject matter resource on the internal audit of a multi-billion dollar mine development project in Saskatoon, Canada. The processes under Steve's review included the project study and objectives, infrastructure transport and logistics, market analysis, investment evaluation, project delivery, scope, schedule, cost, and stakeholder management.

Steve coordinated a contractor audit on a \$150m buried pipeline project at a power site in the Midwest. The focus areas of the audit include actual cost and invoicing reviews, change management and control, scheduling, and earned value management systems.

- BS in Industrial Engineering and MBA in Finance, both from Pennsylvania State University
- Certified Cost Professional, Planning & Scheduling Professional, and Project Management Professional



Andy Patterson
Partner

Columbus
Tel. +1 (614) 232 7980
Email: andy.patterson@ey.com

Role - Subject Matter Resource Advisor, Power and Utilities Programs

Profile

- Andy is a principal in Ernst & Young's Advisory Services practice with over 20 years of experience in the energy and utilities industry.
- Andy has extensive experience with programs and processes used to oversee large-scale, energy utility capital investment programs.
- ► He focuses on the areas of strategic planning, operations effectiveness, performance improvement, and pre- and post-merger work.
- ► His work experience also includes five years as a member of the leadership team at American Electric Power:
 - Vice President, Strategic Analysis: developed portfolio models/tools for assessing unregulated capital
 - Senior Vice President, Business Development: led an effort to redevelop capital allocation processes and tools corporate-wide
 - Senior Vice President, Corporate Development: assessed a wide variety of M&A opportunities and contributed to corporate strategy

Relevant Experience

- Recently, he is acting as the Engagement Partner for a complete workout of the capital investment strategy, capital allocation processes and risk oversight for a multi-state utility holding company
- ► For the nation's largest transmission owner he directed an assignment to establish the resource forecast and supply chain strategy to develop \$1.8B in new transmission spend tied to ERCOT's CREZ build-outs
- ► For a top five nuclear owner he led the strategic sourcing effort and created the risk management program for the EPC work needed to accomplish \$1.3B in nuclear power uprates at two sites involving four units. These back-to-back capital projects received ROE sweeteners from the PUC for performance ahead of target and require a robust compliance regime
- For the nation's second largest transmission owner, he led an effort to integrate a PMO needed to oversee a \$2.2B upper Midwest transmission build-out undertaken by a consortium of utilities.

 These assets are needed to energize wind resources in the upper Midwest
- For one of the largest nuclear owners he led a series of operational audits to review strategic alliances with major construction vendors/OEMs

- For a variety of power generation and high voltage transmission companies he as led construction readiness reviews to ensure project controls are sufficient for major capital expansion programs
- ► For Canada's largest transmission owner, he diagnosed capital planning and project oversight processes for a series of capital programs. These projects aim to flow Canadian hydro resources into New England
- ► For a large T&D contractor he assisted with a review of their approach to major project management including a 'constructability' review to manage large-scale capital projects for energy utilities

Education and professional qualification and accreditation

- BS Kettering University
- MBA University of Chicago



Hannah Green Senior Manager, Advisory Services

Toronto
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Email: hannah.green@ca.ey.com

Role - Subject Matter Resource Advisor, Hi-Profile Program Risk

Profile

- Hannah is a Senior Manager in Ernst and Young's Advisory Team in Canada, specializing in Risk Management, Program Assurance and Internal Audit. She has worked on numerous project risk and performance evaluation engagements with EY; and has developed and delivered internal audit plans.
- Hannah also has skills in commercial excellence and has successfully identified and achieved contract savings for clients.
- ► Hannah has a strong project management focus and has worked with many private and public sector in Canada and the UK. She recently led a review of the financial planning and budgeting process of a Canadian power authority; and performed an evaluation of the internal audit function of the authority responsible for the transportation in the Greater Toronto and Hamilton area.
- Notably, Hannah spent three years performing a program risk management role for the London 2012 Olympic Delivery Authority. This role included review of the changing risk profile; and the development and delivery of the internal audit plan for the \$12.5bn capital program. These roles have required regular liaison with stakeholders in the public and private sectors, giving Hannah experience and a strong understanding of the breadth of requirements and communication needs.
- Prior to joining consulting Hannah worked as a National Health Service graduate Financial Management Trainee, gaining her CIMA management accountancy qualification and performing a wide range of roles within Finance in the UK health sector.

Relevant Experience

- Internal Audit Manager, Olympic Delivery Authority
 - Hannah spent three years developing and delivering the Internal Audit plan for the large Olympic capital program. The role required leadership of the risk assessment process, recognizing the changing nature of risks faced by projects and the assurances required. Hannah led discussions with management to feedback findings and to agree appropriate actions; and presented audits to the Audit Committee. The Risk and Audit function was recognized for aligning its approach and focus to the needs of the organization; and for identifying and helping prevent new risks from becoming issues.
- Financial Audit Lead, Olympic Delivery Authority

Hannah led the team delivering financial management internal audit reviews to the multi-project Olympic program. Hannah reviewed the adequacy and accuracy of financial management, comparing actual costs incurred and trends encountered with financial estimates and forecasts. The work considered different types of contract, assessing the charging of costs and payments

made in line with these terms and conditions; identifying savings and making recommendations to improve financial processes and increase transparency and accuracy of forecasts going forward.

Capital Program Lessons Learned Review, Nuclear Power Client

Hannah led the planning and delivery of a project to identify the lessons learned from the refurbishment of two nuclear units – a significant capital project that had experienced both schedule and cost overruns. Hannah worked with client team members to review a number of different areas of the project, including project management, financial management, engineering, commercial management and human resources. The lessons learned project delivered insight into the root cause of issues encountered; and provided tools and methodologies that will help avoid similar mistakes being made in future projects.

Internal Audit Effectiveness Review, Greater Toronto and Hamilton Area Transportation Manager

EY was engaged to work with the Head of Internal Audit, to evaluate the Internal Audit department (IA) and develop a roadmap to transform the function to enhance the value of IA to the organisation. Hannah's approach was to review selected supporting documents and meet with key IA stakeholders to discuss and assess how the Internal Audit function aligns with the Audit Committee, executive management and stakeholder needs and expectations. Hannah assessed how the function compares with leading practices; and worked with the Head of Internal Audit to identify targeted areas of improvement and recommendations to achieve a more effective and efficient, value-driven function.

- Hannah provided leadership of the delivery of all internal audits at a quasi-Governmental property management firm. Reviews were in a number of different areas, including rental revenue planning and management; and financial investment reviews. Hannah liaised with management, helping identify the need for reviews to occur; and enabling their understanding of the recommendations to improve the design and operation of key financial processes and controls.
- Enterprise Risk Management, Commercial Real Estate owner, operator and developer Hannah led development of the Enterprise Risk Management, Risk and Control Matrix. This involved identifying and evaluating the control principles of the organization; identifying and evaluating the established controls in place - including details such as the control owner, organisation level, control frequency and validator; and assessing the alignment of controls against the risk profile. This provided an overall assessment of the adequacy and alignment of the control framework, relative to the key risks facing the client. Key strengths were highlighted and recommendations provided to address gaps or weaknesses.
- Contract Management and Commercial Excellence Process Development, Power Generator Hannah led a review of the approach to contract management and commercial excellence within the capital project delivery team of a multinational electricity and gas utility. The review evaluated the needs of the organization for balance between contract flexibility and achieving competitive rates. The review identified inappropriate charges/recoverable costs from existing contracts; and led to the formalization and streamlining of the contract management process.
- ► Internal Audit Effectiveness Review, Insurance Firm

 Hannah led a review to assess the effectiveness of the Internal Audit function relative to regulatory and industry sound practices. The review used an assessment framework consisting of three tiers:

Governance; People and Organization; and Infrastructure and Operations, covering nine specific control dimensions. Hannah looked at the alignment of the current state to sound practices, providing guidance and recommendations to address areas found to be in need of improvement.

- Internal Audit & Assurance Effectiveness Review, National Railway Network Manager

 The client wanted to understand the sufficiency and effectiveness of the assurance framework in place within their organization, relative to the risk profile. Hannah led a review looking at the key risks facing the organization and the resources and processes in place to identify and manage these. She assessed the communication network, reviewing the ability for risks to be identified and escalated as necessary. The review led to greater risk assessment activity and broader, more risk aligned assurance functions.
- Lessons Learned, Nuclear Power Client Hannah lead a project to identify the lessons learned from a significant capital project that had experienced both schedule and cost overruns. Hannah worked with client team members to review a number of different areas of the project, including financial management, project management and engineering. The lessons learned project delivered insight into the root cause of issues encountered; and provided tools and methodologies that will help avoid similar mistakes being made in future projects.

Education and professional qualification and accreditation

- BA Economics and Geography
- Projects In Controlled Environments (PRINCE 2) certified
- Associate of the Chartered Institute of Management Accounts (CIMA)

APPENDIX B - Proposed Report Structure

We recognize that a significant effort will be undertaken with notable stakeholder involvement to arrive at a final report structure for the Oversight Committee. EY has put initial thought into how such reporting could be structured. We look forward to working alongside of you to finalize the cascading reporting structure to the Executive Director - Muskrat Falls Oversight, the Oversight Committee, Cabinet, and the general public.

Regular (Quarterly) Reporting - Table of Contents

- 1. EXECUTIVE SUMMARY (1-2 pages)
 - a. Background
 - b. Overall Project Status
 - i. Scope
 - ii. Schedule
 - iii. Cost
 - iv. Risks & Issues

Likely 1 - 2 pages that provide summary level overview the components listed. Likely this forms the basis for the report to Cabinet. The remaining sections will be appendices (details).

- 2. SCOPE (By Work Package / Contract)
 - a. Baseline, Work Breakdown Structure, % complete
 - b. Material Scope Changes (Approved, Rejected, Pending)
 - c. Integrated change control tracker (scope, schedule, cost)
 - d. Discussion & Analysis
 - i. Scope Risks & Issues
 - ii. Recommendations
- 3. COST (By Work Package / Contract)
 - a. Baseline Cost & Approved Changes
 - b. Actual Costs, Estimate To Completion, Estimate @ Complete
 - c. Planned Value, Earned Value, Cost Performance Index (where applicable)
 - d. Cumulative and In Period cost variance, corrective actions
 - e. Discussion & Analysis
 - i. Finance Risks & Issues
 - ii. Recommendations

- 4. SCHEDULE (By Work Package / Contract both Critical Path and Off-critical Path)
 - a. Baseline Schedule Summary & Approved Changes
 - b. Milestone (completed, upcoming, missed) Schedule Variance, Corrective Actions
 - c. Measured Progress (and Schedule Performance Index where applicable)
 - d. Look-ahead schedule (e.g. 4 weeks, 6 months)
 - e. Discussion & Analysis
 - i. Schedule Risks & Issues
 - ii. Recommendations
- 5. [Optional: Findings & Recommendations from Process and Controls Assessment]
 - a. Processes & Controls (Observation, Risk, Priority & Recommendations)
 - b. Reports & Data (Observation, Risk, Priority & Recommendations)
- 6. Risk & Issues (By subject area)
 - a. Risk, issues and concerns
 - b. Risk assessment matrix (likelihood, magnitude / severity) and risk criteria
 - c. Risk register (up-to-date) showing risk owner, risk severity (probability and impact)
 - d. Risk response tracking & Reporting
 - e. Contingency & Draw down
 - f. Discussion & Analysis
- 7. Plans For Next Reporting Period
 - a. Next Report Scope
 - b. Key Program Events (including other assurance providers)
 - c. Other OC scheduled activities

APPENDIX C - Detailed Approach

The Committee is accountable for Project Oversight and Reporting on the Project's cost and budget performance, schedule performance and cash flow requirements. Its formal Terms of Reference is to provide oversight so that the public can have confidence that:

OC Mandate #1 - The project cost and schedule are well managed

Our approach will comprise the review of the project organization and governance including definition of accountabilities, roles and responsibilities and escalation processes.

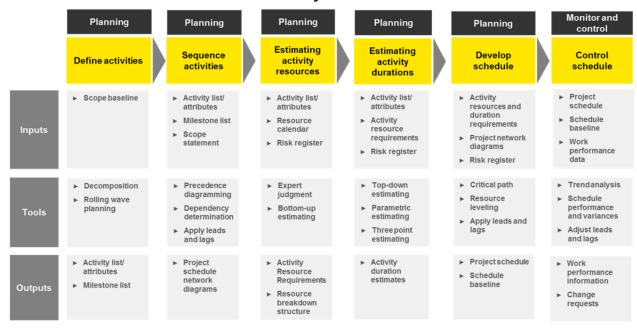
In order to validate that management processes and controls are well-designed and followed, we will review the Project Management Plan (PMP) and related processes and plans. The PMP is a key project documents that need to describe how the project will be managed and controlled and also identify project methods, processes and controls.

The review of the PMP document will focus on scope, schedule, cost and risk management processes and will use the processes illustrated in the following charts as term of reference. Following processes are in line with PMI (Project Management Institute) and industry standards.

Scope Management Processes **Monitor and Monitor and Planning Planning Planning** control control Collect Define scope **Create WBS** Control scope Verify scope requirements ▶ Scope baseline ▶ Project order ▶ Project order Scope Scope baseline statement ▶ Stakeholder ▶ Work performance ▶ Validated ▶ Requirements Inputs register Requirements deliverables documentation documentation ► Variance analysis ► Inspection ► Facilitated ▶ Expert ► Decomposition judgment workshops **Tools** Alternatives Interviews identification ▶ WBS and WBS Requirements ► Projectscope ▶ Work performance Accepted documentation statement dictionary measurements deliverables Outputs ▶ Scope baseline ► Change requests ▶ Change requests

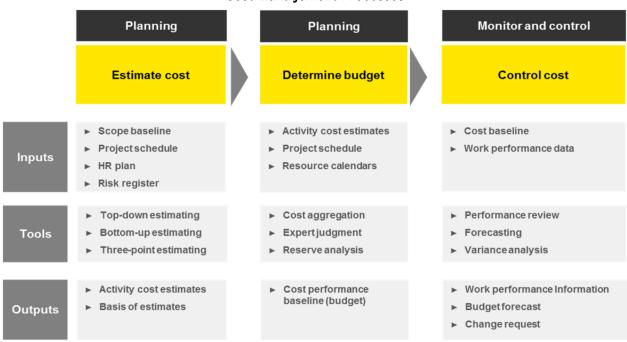
Scope management focuses on making sure that the scope is well defined and clearly communicated and that the project is carefully managed to limit unnecessary changes. The work needs to be closely monitored to ensure that when change does happen on the project, it is evaluated, captured and documented through an Integrated Change Control Process.

Schedule Management Processes



Schedule management processes include all the logical processes required to develop the project schedule and monitor its progress and performance.

Cost Management Processes



Cost management processes are primarily concerned with the cost of resources (materials, equipment, and manpower) needed to complete the project, how they are estimated and monitored and controlled.

OC Mandate #2 - The project is meeting cost and schedule objectives

Monitoring and controlling processes will be used to assess schedule and cost progress and performances as well as to manage changes to baselines and to track deviation from the plan so that corrective actions can be taken to minimize the risk of not meeting the plan.

It is important to have confidence that processes and tools are not just being defined but are also being appropriately used. This is particularly true in the core areas of scope, cost and schedule development, management and reporting. To check this, we have developed a series of analytical tests which assess the integrity of the estimates, plans, revised forecasts and the accompanying reporting. This helps intercept major issues and provide effective oversight.

For schedule monitoring and control:

Project schedule, project baseline and information on project progress (i.e.: which activities have started, their progress, actual duration, remaining duration, physical percent complete, and which activities have finished) will be reviewed to assess:

- Work Performance Information (i.e.: available float on respective projects and sub projects)
- Schedule Forecasts (i.e.: estimates of project's future based on the work performance information provided)
- Change Requests, which may be required to adjust the baseline as result of the schedule variance analysis and performance measurements.

Contract Award

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Contract Co

Key testing to be conducted on schedule includes:

- Baseline development- quality check of the baseline including confirmation that schedule baseline is understood by key team member, prepared with CPM logic networks in P6, all major milestones are identified, it is resource loaded and levelled consistently with project budget.
- Schedule Integrity schedule is developed in accordance with WBS and control budget, it is multi-level (L1, L2, L3, L4) with all levels aligned.



4.5 mons

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Mon 01/12/08

Mon 26/01/09

Mon 20/04/09

Fri 12/06/09

Fri 12/06/09

Mon 30/06/08 Fri 31/10/0 Mon 01/12/08

- Estimation risk based management reserves have been calculated and/or included in the schedule; risk mitigating tasks have been included in the schedule; resource levelling has been performed in order to support development of a valid baseline; there are reasonable metrics/basis estimate for the task length.
- Construction all the tasks per the work breakdown structure are mapped on to the schedule; logical dependency links are properly represented; critical path(s) is clearly identifiable; all external

- dependencies are identified; the maximum task length in the current planning window give sufficient information with which to chart progress; there is an invalid paralleling of tasks by using invalid negative lag times to reduce overall project duration.
- Reporting schedule report is able to provide accurate and timely information for management decision-making; task shown in progress are actually in progress; tasks noted as complete are actually complete (e.g. how many tasks have been complete to-date that were scheduled to be complete per the plans at project start up?); progress against the baseline has been tracked; variances have been tracked and corrective action planned; performance metrics (e.g. Schedule Performance Index SPI) have been gathered and analyzed; trend over time is shown.

For cost monitoring and control:

Cost baseline and Work Performance Data, which include information on project progress and incurred costs, will be reviewed to assess:

- Work Performance Information (i.e.: Estimate At Completion and Estimate To Complete)
- Change Requests, which may be required to adjust the baseline as result of the cost variance analysis and performance measurements.

Key testing to be conducted on cost includes:

- Integrity project coding structure is approved, established and implemented; approved control budget is established for the project for the purpose of monitoring and control; all approved committed and incurred costs are recorded against approved budget codes
- Estimation processes to calculate Estimate To Complete (ETC) and their frequency; trend for Estimate At Completion (EAC); Estimate accuracy level; Contingency assessment
- Construction cost elements are mapped to the project work breakdown structure; change management process is implemented to address cost changes; cost expenditure matches project schedule and peak of resources
- ▶ Reporting cost report are issued regularly; the progress of the project is measured against baseline; committed, incurred, forecast costs are reported; cost performance index (CPI) is calculated as well as ETC and EAC.

OC Mandate #3 - The cost and schedule risks are being reasonably anticipated and managed

Review of the risk management processes and related risk register will be conducted. Project Risk Register needs to include all identified risks along with their likelihood of occurrence, impacts, planned risk responses and risk owners. The register needs to be regularly reviewed by the project team and updated as the project unfolds.

A Risk Breakdown Structure needs also to be in place to list all categories and sub-categories within which risks may arise such as:

- Organizational risks (lack of stakeholder buy-in)
- Planning risks (uncertainty in scope, timeline, economics)
- Scope risk (unclear definition of in/out of scope)
- Schedule risk (uncertainty in timeline, complex interdependencies)
- Resource risk (lack of availability, competency)
- Technical risks (technology may not perform as expected)
- Performance risk (unrealistic performance requirements/expectations)
- External dependencies (3rd party involvement)

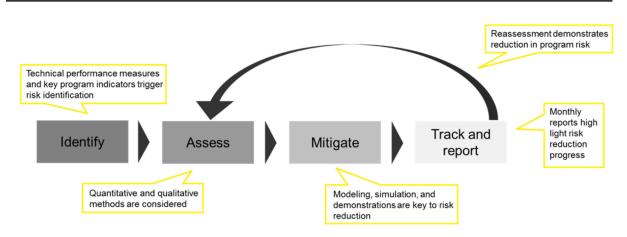
Project cost and schedule contingencies will have to be reviewed periodically based on updated risk register information, project performances, approved changes and forecast data. As project unfolds and risks are eliminated or impacts realised, the contingency values needs to be adjusted accordingly.

The monthly reports should contain a section dedicated to risk to provide updates and progress on:

- New risks identified (if any)
- Status of identified risks (active, close, reduced)
- Updated risk score (severity, likelihood)
- Updated status of potential impacts (time, cost, quality)
- Status of risk responses
- Risk owner

The diagram below depicts risk management process flow.

Risk management is a collaborative effort that is repeatable



APPENDIX D - EY's Global Power & Utilities Center

The EY Global Power & Utilities Network includes more than 3,800 Professionals around the world, of which 592 are Partners. More than 1,200 Professionals of these professionals provide our clients with Advisory services.

The Global Power & Utilities Center aims to support our global network of professionals working for the power and utilities sector. It works to anticipate market trends, identify the implications and develop points of view on relevant industry issues. It provides the links between those issues and EY's services and facilitates the development of relevant service offerings.



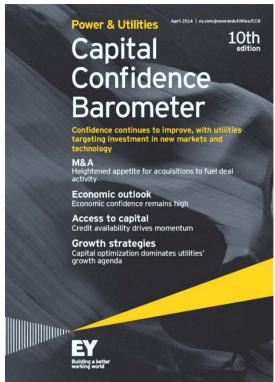
EY's Advisory Power & Utilities thought leadership and events

Our thought leadership and research addresses a broad spectrum of challenges, from industry-wide issues to specific technical, business, regulatory and compliance concerns.

Samples are included on the following page.













APPENDIX E Quality Management Program for larger assignments

Quality will be an imperative in undertaking this assignment as the insights and reports generated must extremely well founded given the sensitivity of the program. This will also be critical to the management of the key stakeholders in the assignment.

Following contract award, we would work with you to further tailor the following quality program designed for larger high profile assignments.

Quality Management Plan Summary

Quality is built into our assignments from initiation by using quality in our human resources, our service methodologies and their deployment. EY's success has been built on our commitment to quality and satisfying the stated and implied needs of our clients.

A formal quality program is also in place in our Firm across Canada. This quality program involves the application of quality processes to all aspects of every one of our engagements the use of Quality & Risk management audits as an internal check on performance to our standards and Assessment of Service Quality (ASQ) reviews which are worked jointly applied across the organization.

These processes are fed back into the delivery of our services for all clients. The Government will benefit from past quality management activities deployed when performing comparable services for prior clients. "Continuous Service Improvement" is also an implicit part of our national quality program and attracts significant investment both within Canada and globally.

For the purposes of this assignment, our quality approach will feature:

- A basic Quality Management Plan developed at the initiation of the assignment. This will include a statement of Quality Planning, Control & Assurance incompliance with PMBOK methods, ISO 10005 and other quality industry standards;
- A risk-based approach which ensures both cost effective use of quality resources and an inherent focus on understanding the business impact of quality issues; and
- Assessment of Service Quality on completion of the assignment

The key elements of our approach to quality for work conducted under this Government`s assignment are described in the subsequent sections.

Quality Planning

Quality planning is the process of identifying and documenting the approach, the appropriate procedures, resources, responsibilities and standards for achieving quality objectives and related standards. As such, it defines the framework for managing the quality of the project deliverables and the project itself.

Inputs

The inputs to quality planning for each assignment typically comprise of:

- Our Client's Quality Policy and/or Quality Management Plans.
- EY's existing standards, tools and quality policy;
- ► The Project's Statements of Work or engagement letter governing the assignment, including success criteria and objectives;
- ▶ Leverage of the Government's prior Quality & Risks Artefacts

Tools/Techniques

By ensuring the focus of quality management is aligned to business impact and outcomes, we are able to proactively build quality into our services, our deliverables and also provide prioritized insights and business-aligned recommendations for any assignment improvements. This makes defining the project's key objectives, the success criteria and client expectations an imperative at the beginning of the planning process.

These expectations must be well understood, documented, and achievable. In larger assignments, this may include previous cost/benefits trades and analysis. Identifying client expectations also encourages a measurement of project management, process deployment, and deliverable satisfaction. In addition to the review of the Input data, the expectations may be collected through the use of surveys, project team workshops, and/or individual interviews with critical stakeholders.

Planning is completed during project initiation and/or planning using our standard Quality Management Plan templates. For smaller projects, these are documented in the Project work plans. The Project Plans and Project Risk Analysis are used to prioritize areas of focus.

The Quality Management documents and/or plans are then submitted for the client's review and updated accordingly as part of the initial project baseline.

Outputs

- Quality Management Plan (or equivalent sections in a Project Plan).
- Any checklists and/or templates.
- Inputs to other processes or activities on the assignment.

Quality Assurance

We view Quality Assurance as the processes evaluating assignment performance on a regular basis to provide confidence that our services and deliverables satisfy the relevant business objectives and/or quality standards. Our Quality Assurance approach integrates project review and risk management activities, helping to eliminate the characteristics of failure and provides the recommendations, tools and support necessary to help organizations underpin their projects based on our extensive research into the drivers of project success.

Inputs

- The Quality Management Plan or Quality Management sections of the Project Plans where applicable;
- Our clients Quality Assurance deliverables;
- ▶ Results of Quality Control activities and project status information; and
- Other documents as required
- Tools / Techniques

For most consulting assignments, Quality Assurance tasks are principally the responsibility of the Engagement or Client Relationship Partner. For large assignments a separate Quality Assurance organization would be established with independent reporting to the Engagement or Client Relationship Partner.

The groups typically use two main vehicles to perform Quality Assurance:

- Final review of any assignment's phase deliverables; and
- Periodic independent risk reviews based on process/ standards, success drivers and reasons for failure:
- Client satisfaction surveys on completion of each assignment.

In this case, our Ontario leader who runs our largest provincial public sector practice and who has strong municipal experience will act as a second reviewer of the deliverables and activities of this assignment for the Government.

For our larger assignments (e.g. should we be required to perform remediation work together with the Government following our initial assignment) analysis of the trends of results from quality control activities can also be performed and separate Quality Reports produced. This can include analysis of the level of re-work required on our deliverables or the maintenance of metrics on defect identification &/or fix rates on more complex assignments.

The scope of QA however, is not limited to classic work product specifications. It also views the project metrics of on-time and on-budget delivery as key performance measures. As such project reporting and weekly progress review meetings form an integral part of the Quality Assurance framework for the assignment.

Outputs

The outputs are quality improvements comprising:

- Additional product re-work if required;
- Process improvements; and
- Project reports and updates to project plans where necessary.

Quality Control

We view quality control as those activities monitoring specific project deliverables to determine if they comply with relevant specifications and quality standards. Quality control also identifies ways to eliminate the causes of unsatisfactory performance.

Each member of the team has personal responsibility for the quality of their own activities and deliverables. Indeed, their performance on assignments including technical and service delivery characteristics are criteria by which each individual is judged in their assignment and/or annual performance appraisals which govern their awards under our incentive and compensation schemes.

That being said, assignment quality control is also an implicit part of our approach to quality management. This is implemented as follows.

Inputs

- Assignment deliverables and project status reports;
- Quality Management Plans; and
- Other documents as required.

Tools / Techniques

Most typically, the first level of quality control for our deliverable is implemented through both peer review and review by the Engagement Manager/Executive. These are based on the standards defined in the quality management plan and/or traceability and compliance with other parent documentation. Most typically this takes the form of bench review but can involve the use of our tools which incorporates a series of standard checklists and reporting tools supporting a full project lifecycle derived from a variety of standards including PMBOK, Mil, and ISO.

Where appropriate a second level of Quality Control is performed through testing using tailored forms of standard test management, test specifications, test case and test results.

Finally our project plans always include a stage where all deliverables are reviewed, updated and validated through our clients culminating with deliverable or work product acceptance.

Outputs

- Corrections to deliverables and/or work products;
- Quality Reports (where specifically required);
- Completed Checklists and/or Test Reports (where specifically required);
- Issue Logs, defect logs and statistics (where required).
- Process modifications if required.

Quality Management Issues

When budget, scope and time are challenged, quality itself can suffer. While we have a thorough approach to Quality Management as discussed above, in our experience Quality is compromised where project risks are not mitigated and the project itself is not geared for success.

Ernst & Young has done extensive research into the success drivers and pitfalls of project management and has in response, built a model of project risk categories. It has then designed a corresponding project performance management approach and risk management strategies to mitigate these project risks. A brief summary was provided in Section F of this proposal.

These processes appear in our project management plans (see earlier in this proposal) but also include specific risk identification, analysis, management strategy selection, planning and monitoring processes.

Other specific quality risks and issues that we might anticipate for work conducted under the Government assignment are delineated in the following table for which management strategies are also defined.

ID#	Quality Risk	Management Strategy
1	Maintenance of independence in Quality Reporting	 Good Quality Planning and clear separation of quality roles and responsibilities.
2	Commonality of standards and methods between Ernst & Young and the Client organization.	Ensure these are agreed and signed-off during Quality Planning
3	The application of the standards is doctrinaire with many low importance issues and defects identified.	 Strong Stakeholder needs, Business Case/Benefits focus in Project Management
		 Quality reporting will include prioritization of quality issues and defects.
4	Requirements & work scope ambiguity	Careful review and sign-off at initiation.
		 Strong project and quality planning to mitigate these risks.
5	Competition for resources with other projects impacts quality.	Strong Dependency Management as part of Project Management approach for EY and Government resources
6	Dependence on the quality of other groups work products impacts the project's own work products.	Strong dependency Management as part of Project Management approach
7	Assignment completes without end user buy-in and sign-off	 End users/key stakeholders will be engaged early in each assignment.
		Requirements, work scope and acceptance criteria

		will be signed off at initiation. They will be strongly controlled during execution and will be periodically re-verified.
8	Quality issues are discovered late and/or create management surprises	 Quality Management approach spans full project lifecycle.
		 Quality Issues will be rigorously controlled through Issues/Defects Logs. Issues/Defect status is included in project reporting.
9	Strong push back from key stakeholders in the assignment	EY has already developed respect if not fully welcoming relationships with the key participants
		 EY will ensure service quality, the robustness of analysis and the defensibility of all findings
		 This will leverage not just thoroughness, but also reference to contemporary programs and established third party standards
		 It will also be backed by the depth and credibility of the EY's team

Assessment of Service Quality

On completion of the assignment, you will be contacted by a member of our Quality & Risk Management team. They will request the opportunity to conduct a multi-point check of different aspects of the quality of service delivered to you throughout the assignment.

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