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**Subject:** LCP Governance & Controls Deck  
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**Attachments:** [\\_png](#)  
[LCP Governance & Controls Presentation for GNL 6-14-13 \(FINAL\).pdf](#)

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Hi Paul

As discussed yesterday, here is an electronic copy of the deck we reviewed with yourself and others from the GNL team back in June.

Regards,

Jim



LCP Governance & Controls Presentation for GNL 6-14-13 (FINAL).pdf



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You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

# Lower Churchill Project

## Governance & Controls Overview

June 14, 2013

Boundless Energy



Confidential and Commercially Sensitive

# Presentation Outline

1. Safety Moment
2. Purpose
3. Governance Structure
4. DG3 Baseline
5. Project Control
6. Master Authority for Expenditure
7. Capital Expenditure Authorization
8. Procurement Controls
9. Invoice Processing & Control
10. Internal Audit Assurance Framework
11. External Auditors
12. Other Considerations

# Safety Moment

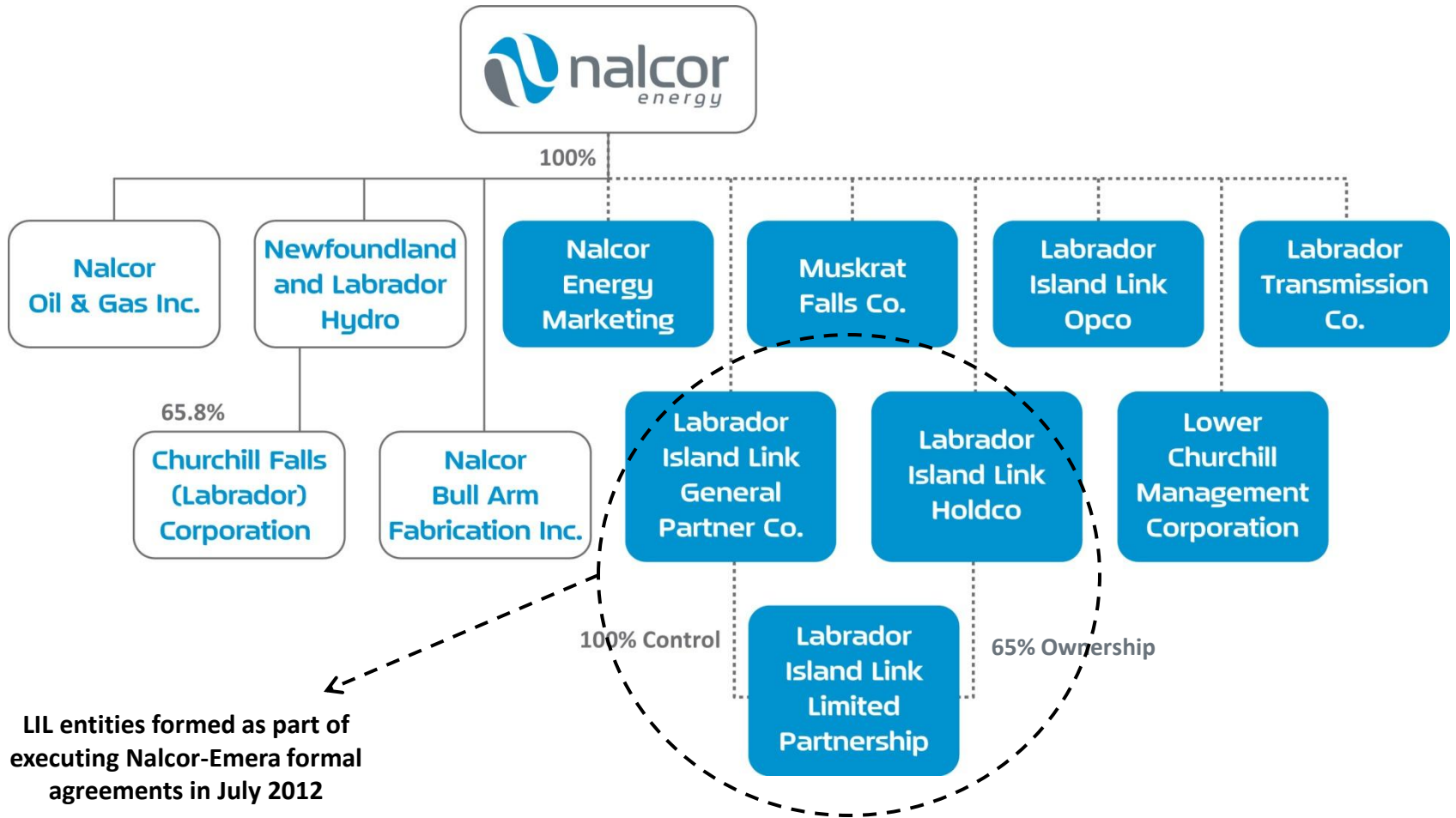
# Purpose

# Purpose

- To provide representatives of the NL Government with an overview of the governance structure, control procedures and assurance framework established within Nalcor Energy and the Lower Churchill Project (“LCP”) to facilitate the management of expenditures against the baseline Decision Gate 3 (“DG3”) cost estimate that was established at Sanction in December 2012

# Governance Structure

# Nalcor's Future Corporate Structure



LIL entities formed as part of executing Nalcor-Emera formal agreements in July 2012



# Background

- Nalcor Energy Board of Directors is accountable to the Province of NL as Shareholder
- As required by legislation, the Boards of Nalcor's LCP subsidiaries must include at least 2 independent directors
  - This will include 1 “super” independent director for the new LCP entities that will be involved in the financing arrangements
- Boards for the LIL companies were established in July 2012 as part of executing the Nalcor-Emera formal agreements
  - Remaining LCP companies and Boards are to be established in the coming months
- The Nalcor Board met 20 times in 2012
  - LCP updates and/or decisions were on the agenda for virtually all meetings

# Background (cont'd)

- Highlights of key LCP related resolutions addressed at the Board are as follows:
  - Execution of the Nalcor-Emera Term Sheet (2010)
  - Advancement through Decision Gate 2 (2010)
  - Execution of Nalcor-Emera Formal Agreements (2012)
  - Advancement through Decision Gate 3 – Sanction (2012)
  - Approval of Master AFE (2013)
- Nalcor Leadership and the Board are provided with monthly/quarterly updates on actual/forecasted LCP expenditures vs. DG3 baseline (see sample in Appendix A)
- Within Nalcor and LCP there are various levels of financial oversight from groups that have different accountabilities
  - LCP Project Controls, LCP Finance & Administration and Nalcor Corporate Finance
- LCP is a key focus of the Audit Committee of the Board for 2013
  - Role of both Internal Audit and External Auditors addressed later in this presentation

# Independent Directors

- Subsection 14.1 (6)(e) of the *Energy Corporation Act* (ECA) stipulates that the board of directors of a subsidiary of Nalcor Energy shall include a minimum number of independent directors, that number varying depending on the size of the board
- A subsidiary board consisting of 5 or 6 members is required to have at least 2 independent directors
- Subsection 14.1 (7) of the ECA defines “independent director” as “a person who is not a member of the board of directors of the corporation or another subsidiary or an employee or officer of the corporation, another subsidiary or the Crown”

# Independent Directors (cont'd)

- As part of the LCP indicative rating process, credit rating agencies stated a requirement that there be at least one “super” independent director on the board of directors of each of the LCP entities that will be involved in the financing arrangements
- The Labrador-Island Link General Partner Corporation was incorporated in July 2012 and one of the two independent directors on the board of that company is a “super” independent director

# Independent Directors (cont'd)

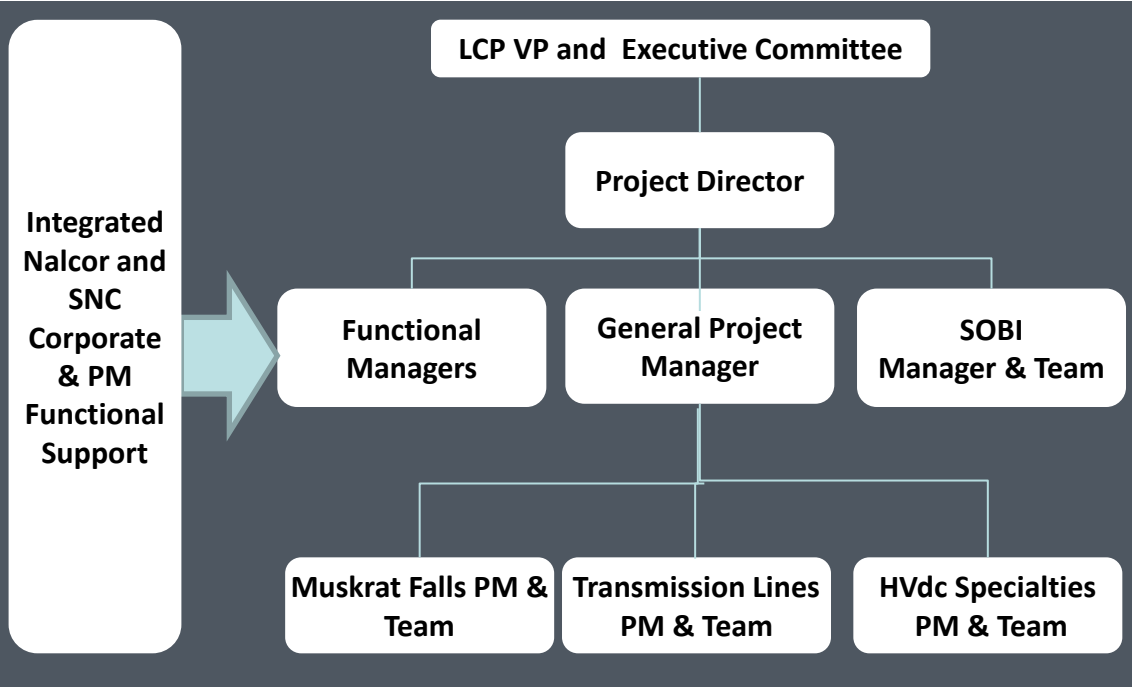
- A “super” independent director is defined as:

a duly appointed member of the Board of Directors who shall not have been, at the time of such appointment or at any time in the preceding five years, (i) a direct or indirect legal or beneficial owner of any capital stock of the Corporation or of any of its Affiliates, (ii) a creditor, supplier, employee, officer, director, family member, manager or contractor of the Corporation or any of its Affiliates, or (iii) a Person who Controls (whether directly, indirectly or otherwise) the Corporation or any of its Affiliates or any creditor, supplier, employee, officer, director, manager or contractor of the Corporation or any of its Affiliates

# Independent Directors (cont'd)

- Independent directors will be appointed for the remaining LCP subsidiaries as follows:
  - Muskrat Falls Corporation – 2 (including 1 super)
  - Labrador Transmission Corporation – 2 (1 super)
  - Labrador-Island Link Operating Corporation – 2 (1 super)
  - Lower Churchill Management Corporation – 2
  - Nalcor Energy Marketing Corporation – 2

# LCP Governance & Org Structure

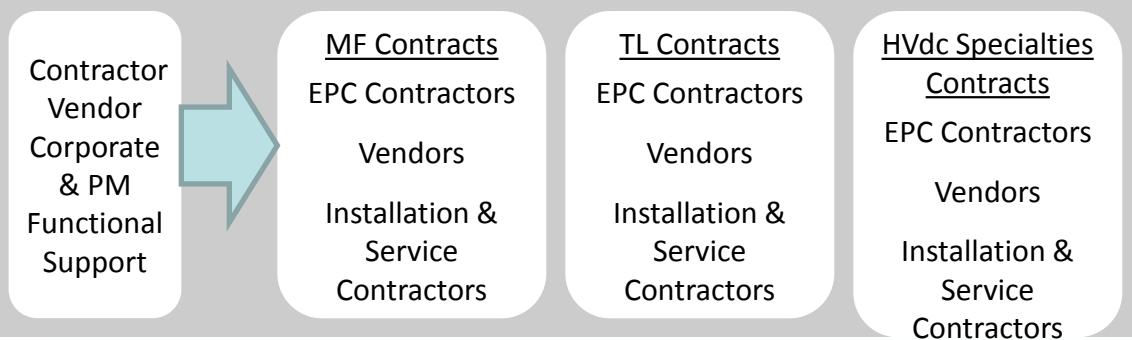


## Nalcor provides:

- + Strong Owner direction, guidance & leadership
- + Experienced PM team
- + 35 years operational experience
- + 30 years front end loading, PM best practices
- + Responsibility for finance, aboriginal, regulatory, insurance, environmental approvals, Shareholder, governance and decision making

## SNC provides:

- + World class track record of hydro-electric and transmission project execution
- + Extensive corporate resources to call on
- + Strong corporate support for Projects
- + Commitment to Project Excellence



## Contractors & Vendors provide:

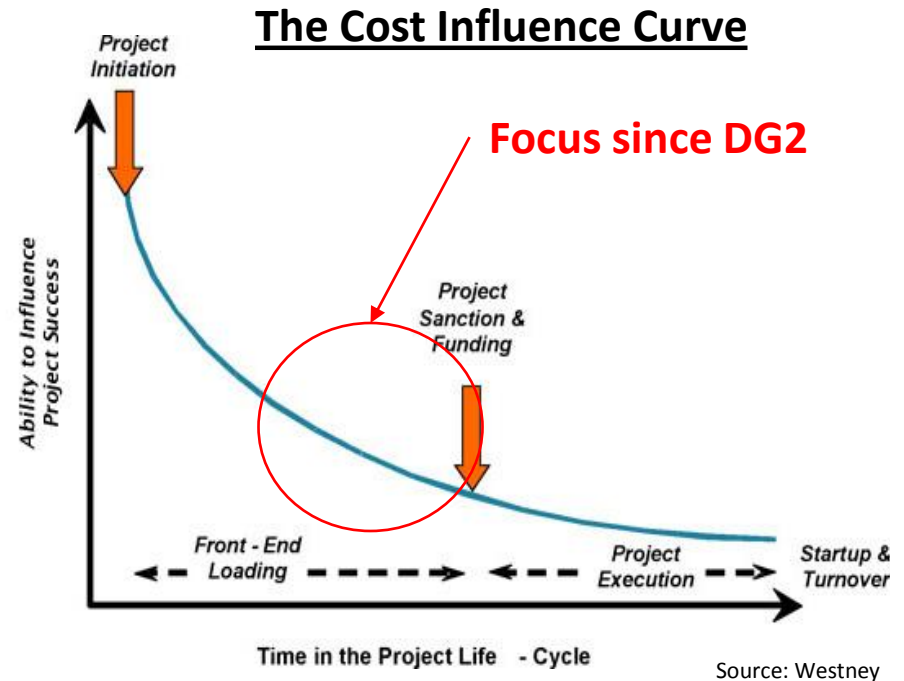
- + Only top quality, reputable Tier 1's will be selected to bid
- + Only those with sound financial basis will be chosen
- + Compliance with contract format, terms and conditions

# DG3 Baseline



# Application of Industry Best Practice

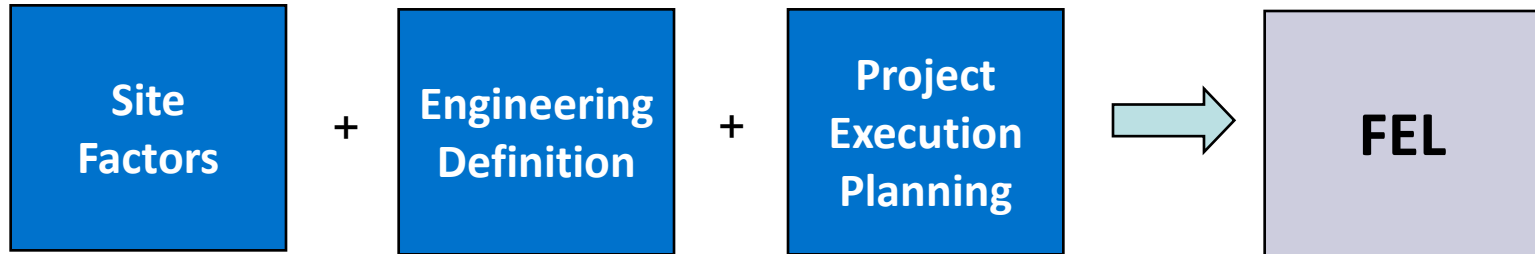
- Front-end loading to confirm project scope and align with business objectives
  - Advanced Project Definition through completion of substantial engineering
    - Target engineering completion prior to start of construction
  - Extensive execution and construction planning
  - Adopt contracting strategies that minimizes and optimally allocates risk
  - Firming key prices through bidding before Sanction
- Early and continued focus on de-risking the projects
  - Shaped engineering, execution planning, contracting strategies, and decision to commence Early Infrastructure Works



*"... the LCP Gate 3 estimate in its current state is one of the best mega-project "base" estimates that this reviewer has seen in some time."*

- John K. Hollmann, PE CCE CEP, Owner – Validation Estimating LLC  
April 2012

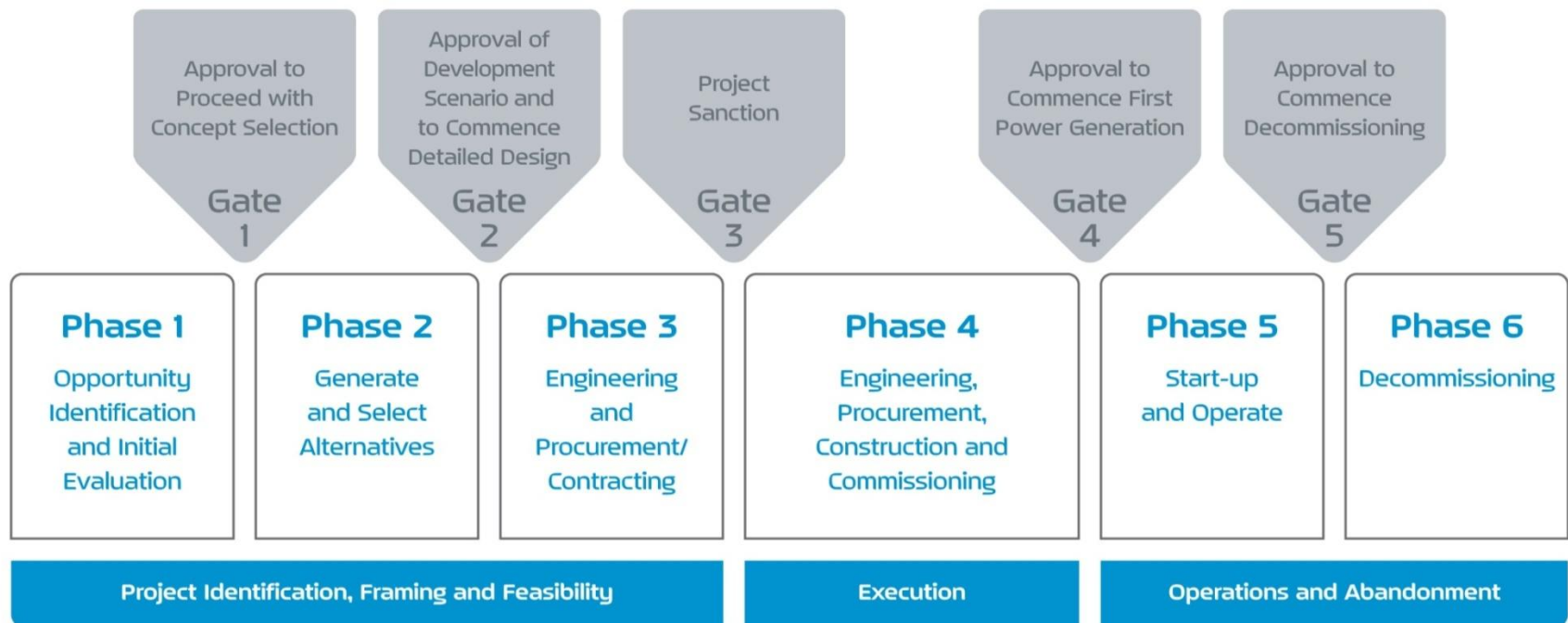
# Front-End Loading: #1 Predictor of Performance



- Gateway Phase 3 focus directed towards completing the level of Front-End Loading to confirm the project definition and a “Sanction-quality” Class 3 cost estimate.
- We are tracking industry best practice which suggest expending 4 – 6% of Total Invested Capital in FEL activities pre-DG3
  - ~\$250 million expended to-date
  - Engineering and detailed design well advanced > 45% complete

# Nalcor's Stage-Gate Process

Structured, front-end loading process that enables risk-informed decision making at Decision Gates by completing critical analysis in the Phase leading to the Decision Gate, while ensuring a balance of analysis with capital pre-investment .



# DG3 Baseline

## ***Baseline:***

- In project control, the reference plans in which cost, schedule, scope and other project performance criteria are formally compared against for assessment of progress and performance, and the comparison benchmark for identifying cost and schedule deviations.

# Baseline is defined in Key Project Documents

- Basis of Design (Rev B2)
- Single Line Diagram
- Project Execution Plan (Rev B2)
- Gate 3 Estimate and Basis of Estimate
- Gate 3 Integrated Project Schedule (IPS)
- Overarching Contracting Strategy and Package List
- Plot Plants (TL routing & Facility Layout)
- Key Management Plans

# Establishing a High Quality DG3 Cost Estimate

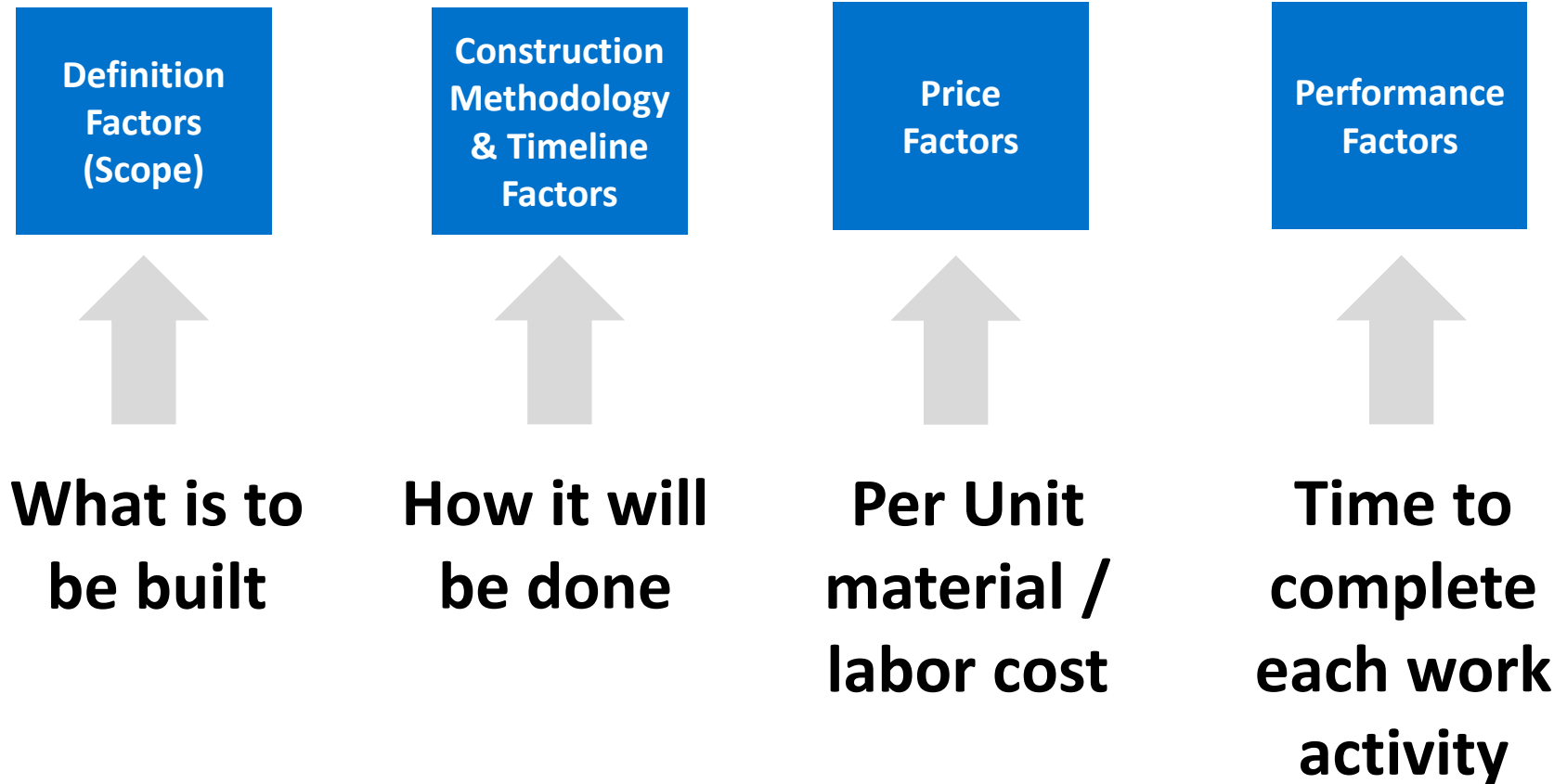
- Estimate accuracy is the degree of confidence that the estimated cost will be close to the final project cost.
- As a project becomes better defined and less likely to change the more confidence there is that the estimate will accurately predict the final project cost.
- The accuracy of a project's cost estimate is a function of the:
  - level of Front-End Loading (i.e. project definition) completed
  - understanding and mitigating project's risk exposure

# Estimate Accuracy

## Shaping Characteristics for Lower Churchill

- Primary Driver:
  - High degree of project definition (i.e. represented by amount of engineering completed)
- Secondary Drivers:
  - Non-technically complex Project
  - Significant amount of effort expended to prepare estimate
  - High quality reference cost data available

# The Estimators Consider 4 Elements





# Each Element has Extensive Information Set



- ❑ Design Criteria & Specifications
- ❑ General Arrangements & Layouts
- ❑ Design Drawings for major components – towers and hardware
- ❑ MF rock and concrete quantities from 3D CAD
- ❑ Master Equipment List
- ❑ Cable List
- ❑ Material Take-offs for Construction Bulks
- ❑ Equipment Specifications
- ❑ Geotech surveys
- ❑ WBS & Cost Codes

- ❑ Construction Philosophies
- ❑ Construction Execution Plan
- ❑ Constructability Reviews
- ❑ Construction Schedule
- ❑ Logistics and Access, incl. freight forwarding & marshaling yards
- ❑ Contract Package Dictionary
- ❑ Org. Design and Staff Plans
- ❑ Construction Equip. Types
- ❑ Labor Demand
- ❑ Labor Demarcation
- ❑ In-directs Strategies
- ❑ Site Services
- ❑ Pre-Fabrication Plans
- ❑ Crane & Access Studies
- ❑ Support Facilities
- ❑ Material Sourcing Strategies
- ❑ Seasonality Constraints
- ❑ Permit Register

- ❑ Labor Agreement
- ❑ Construction Equip. Rates
- ❑ Bid Analysis – T/G, SOBI Cable, Tower Steel, Accommodations, Road
- ❑ Budgetary Quotes – various equipment
- ❑ Site Services Costs – catering, air transport
- ❑ Construction Bulks Prices – Rebar, Cement, Diesel, etc.
- ❑ Helicopters and Airplane
- ❑ Contracting Market Intelligence – overhead and profit
- ❑ Foreign Exchange Rates

- ❑ Crew Make-up and Assignments
- ❑ Task durations
- ❑ Workface Restrictions
- ❑ Labor Productivity & Benchmarks
- ❑ Mobilization Constraints
- ❑ Work Front Stacking
- ❑ Seasonality Impacts
- ❑ Equipment Productivity
- ❑ In-Directs Usage
- ❑ Offsite Fabrication

- ❑ Estimate organized by Project, Physical Component and by Contract Package
- ❑ Documented Basis of Estimate
- ❑ Foreign Currency Demand
- ❑ Person hours
- ❑ Trade demands
- ❑ Cash flows

# Independent Reviews

- At or just after DG2
  - An Independent Project Review (IPR) was conducted,
  - IPA (Independent Project Analysis) did an assessment,
  - Navigant did a check of the business model,
  - Manitoba Hydro International (MHI) did a report for the Public Utilities Board (PUB)
  - The PUB did a public review.
- Coming up to DG3
  - MHI completed a second assessment
  - Another IPR completed at Sanction
- Technical Reviews
  - Independent Engineer (MWH) engaged 2012
  - RFP for Independent Insurance Consultant issued [June 11]

# Third Party Validation

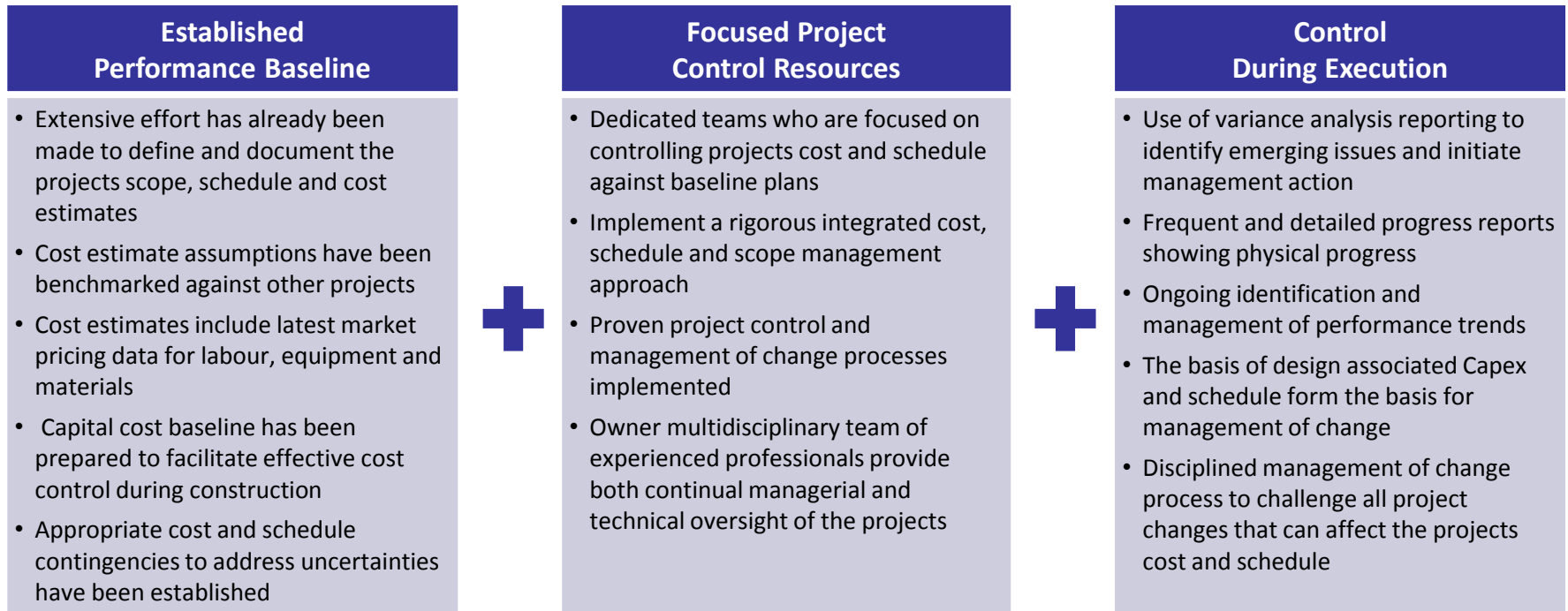
*“... the LCP Gate 3 estimate in its current state is one of the best mega-project “base” estimates that this reviewer has seen in some time. My conclusion is that this is in large part due to the active involvement of the owner leads in striving for best practices and quality.”*

John K. Hollmann, PE CCE CEP, Owner – Validation Estimating LLC

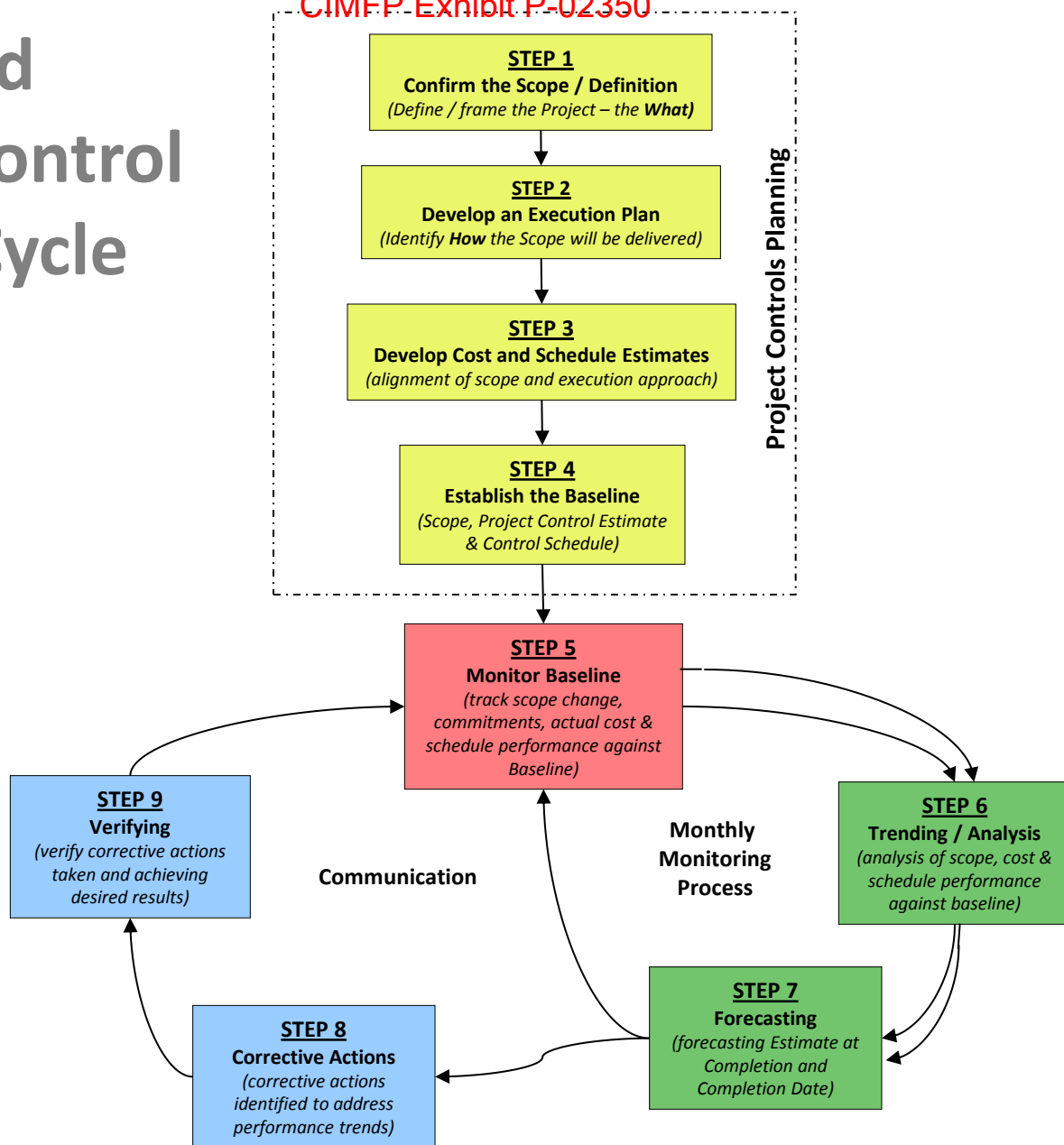
(Recipient of AACE’s highest honor, the Award of Merit, for editing/authoring the Total Cost Management Framework and authoring or assisting in developing many of AACE’s Recommended Practices)

# Project Control Lifecycle

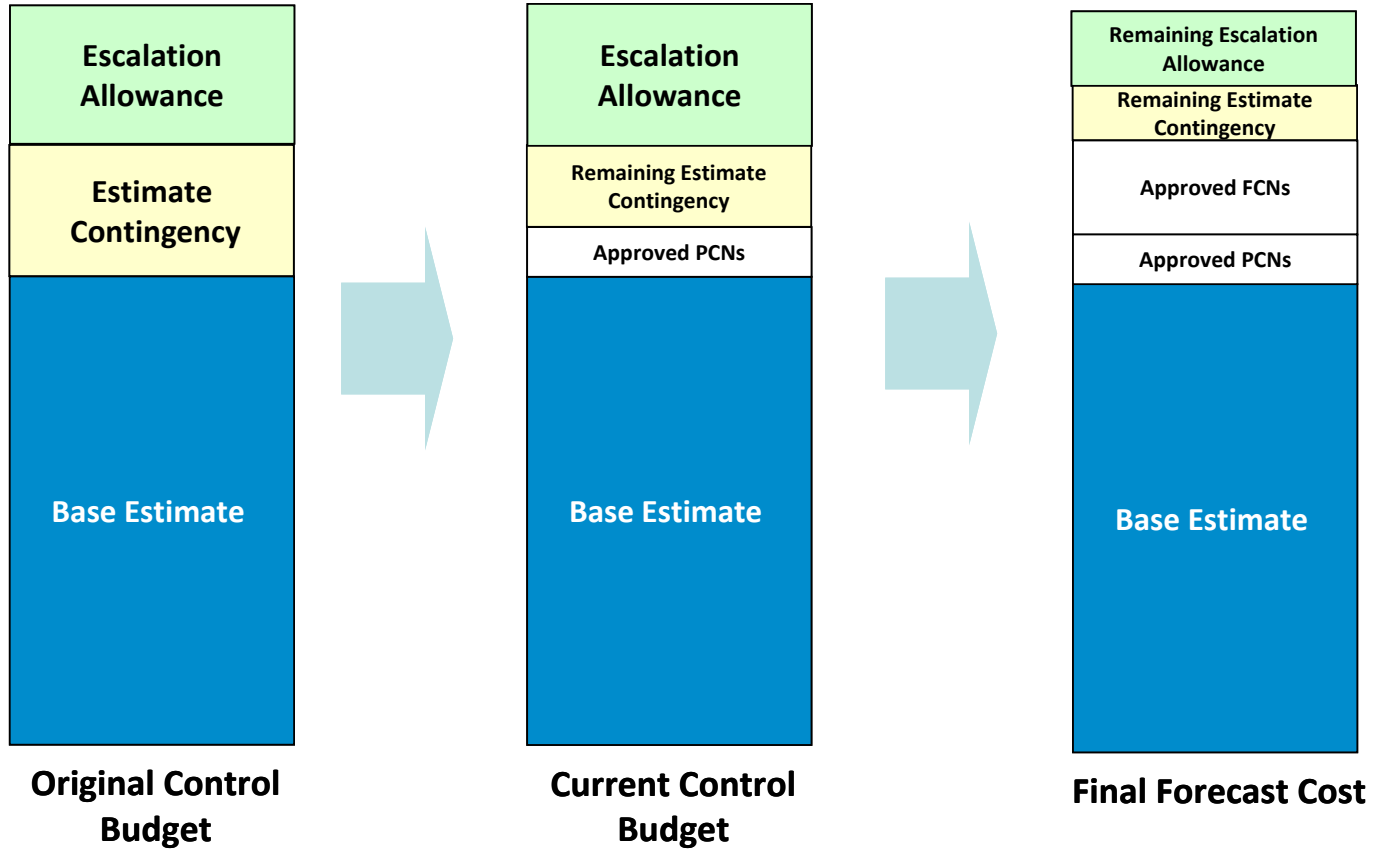
# Maintaining Control During Execution



# Integrated Project Control Process Cycle



# Key Reporting Parameters



# Management of Change

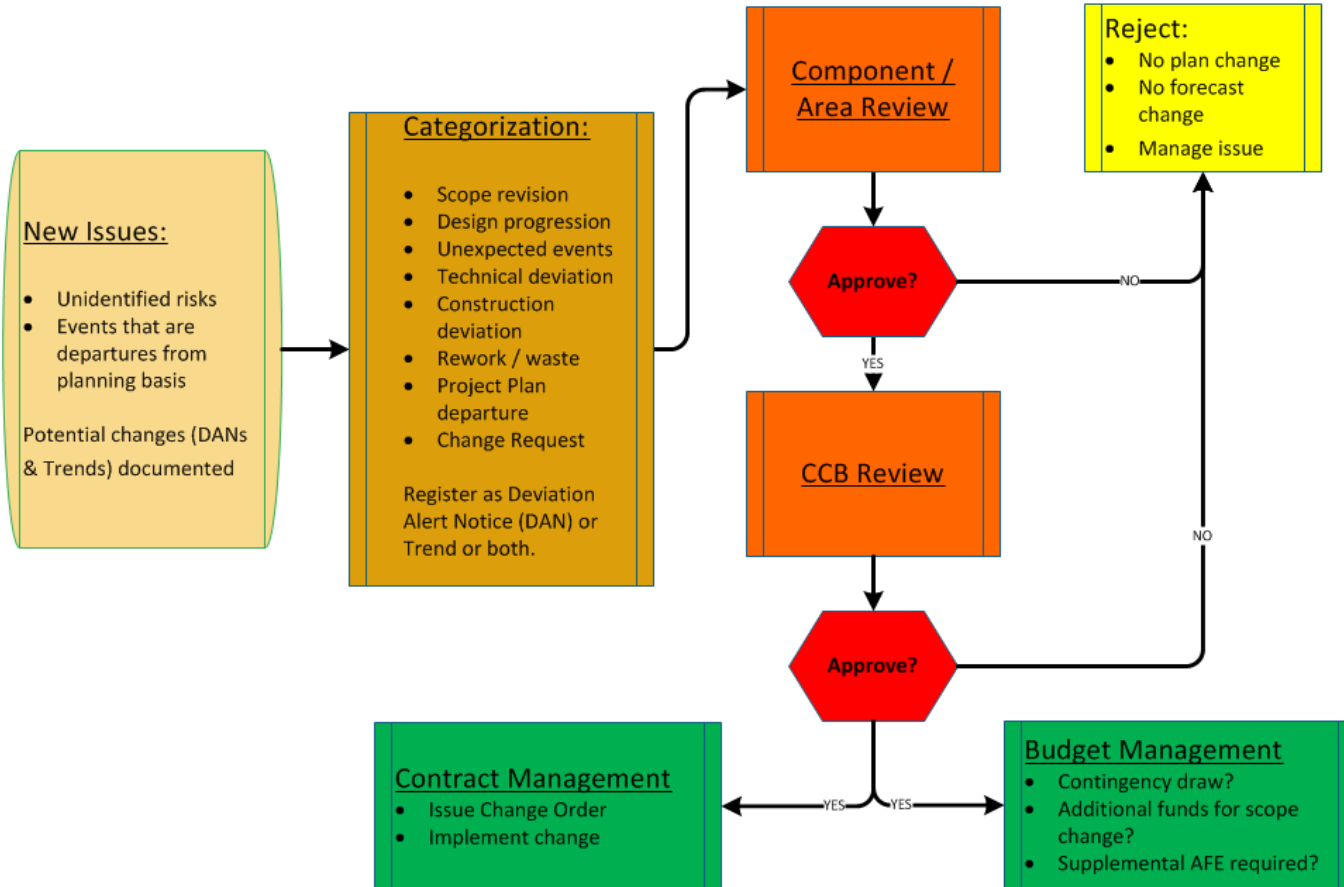


# Approach towards Change

- Discipline, proactive approach to anticipating and managing change is a necessity.
- Early alert of potential change is essential to allow time to work potential change as a team to avoid and / or minimize negative impact on Project.
- Utilization of “Deviation Alert Notice” or “DAN” as a mechanism.
  - Enables linkage with Cost Trends

# LCP Change Management

## LCP CHANGE MANAGEMENT



# DAN – Explanation

- The **Deviation Alert Notice (DAN)** *is the mechanism used to facilitate the processing of potential Project deviations.*
- The DAN form is intentionally very simple and requires only a basic description of the issue that may result in a deviation from the current Project direction.

# DAN – Snapshot of the screen

DAN	PCN X References	SLI References	DAN Actions	DAN Comments
-----	------------------	----------------	-------------	--------------

Close    Print

**DAN**

Save    Delete

Title:     Deviation Alert Notice ID:

Description:   
 New design techniques and advanced software have allowed for accurate design of rigidly framed guyed structures. The transmission industry has started to design guyed "Y" structures as opposed to guyed "V" structures which are typical in the Nalcor Transmission System. Towers with similar weights, lower guy loads and potentially easier erection have been realized by utilizing guyed "Y". SLI are reviewing the opportunity to use the guyed "Y" tower for suspension towers on the 315 KV Hvac lines instead of the guyed "V".

Originator	<input type="text" value="Tucker, Kyle"/>	Submission Date	10-Aug-2011
Package Leader/ Engineer	<input type="text"/>	Status	<input type="text" value="Cancelled"/>
Area Manager	<input type="text" value="Tucker, Kyle"/>	Estimated Cost	<input type="text" value="\$0.00"/>
Scope/Project Manager	<input type="text" value="Tucker, Kyle"/>	Agreement/CP No	<input type="text"/>
Cost Control Account	<input type="text"/>	Close Out Date	<input type="text" value="07-Nov-2011"/>
		Construction Site Event	<input type="checkbox"/>
		Confidential	<input type="checkbox"/>

# PCN – Explanation

- The **Project Change Notice (PCN)** *is the mechanism used to facilitate the processing of potential changes to established Project baselines.*
- The PCN form is a detailed description of the change and requires approval by relevant members of the Change Control Board (CCB)

# LCP – Questions to ask before considering change:

- Is it safe? No- change
- Are there significant cost savings?
- Does it work? No - change
- Would there be a major risk reduction?
- Is it consistent with the design basis? No - change
- Does it meet regulations? No - change

# PCN – Requirements

- The PCN is designed to provide a concise summary of the change with respect to:
  - Description / rationale / benefits
  - Impacts / risk assessment
  - Supporting documentation including *Decision Support Package*
  - Actions required to implement
  - Approval and distribution requirements
  - Closeout requirements

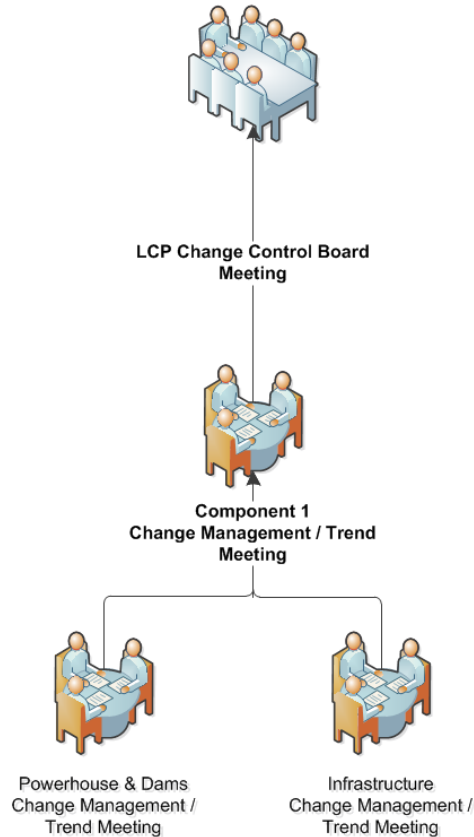
# Escalation of Potential Changes

**PARTICIPANTS**

**Project Director**  
 General PM  
 Deputy General PM  
 Business Services Manager  
 Supply Chain Manager  
 T&DI / RFO Manager  
 QA Manager  
 Marine Crossings PM  
 Project Controls Manager  
 Component PMs  
 Senior Project Planner  
 Senior Cost Engineer  
 LCP Change Coord.

**Project Manager**  
 Deputy Project Manager  
 LCP Change Coord.  
 C1 Change / Interface Coord.  
 Area Managers

**Area Manager**  
 C3 Change / Interface Coord.  
 Package Lead(s) / Engineer(s)  
 Discipline Leads  
 C1 Cost Engineer



**MEETING FOCUS**

**CHANGE MANAGEMENT:**

- Review / challenge new proposed change to validate rationale
- Assess recommendations for proposed change
- Endorse / Reject changes

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- Review / challenge new proposed change
- Assess recommendations for proposed change
- Endorse / Reject changes

**COST CONTROL:**

- Identify and report new potential trends
- Obtain updates on existing potential and verified trends

**CHANGE MANAGEMENT:**

- Assess identified potential changes / trends
- Reject / mitigate to extent possible

**COST CONTROL:**

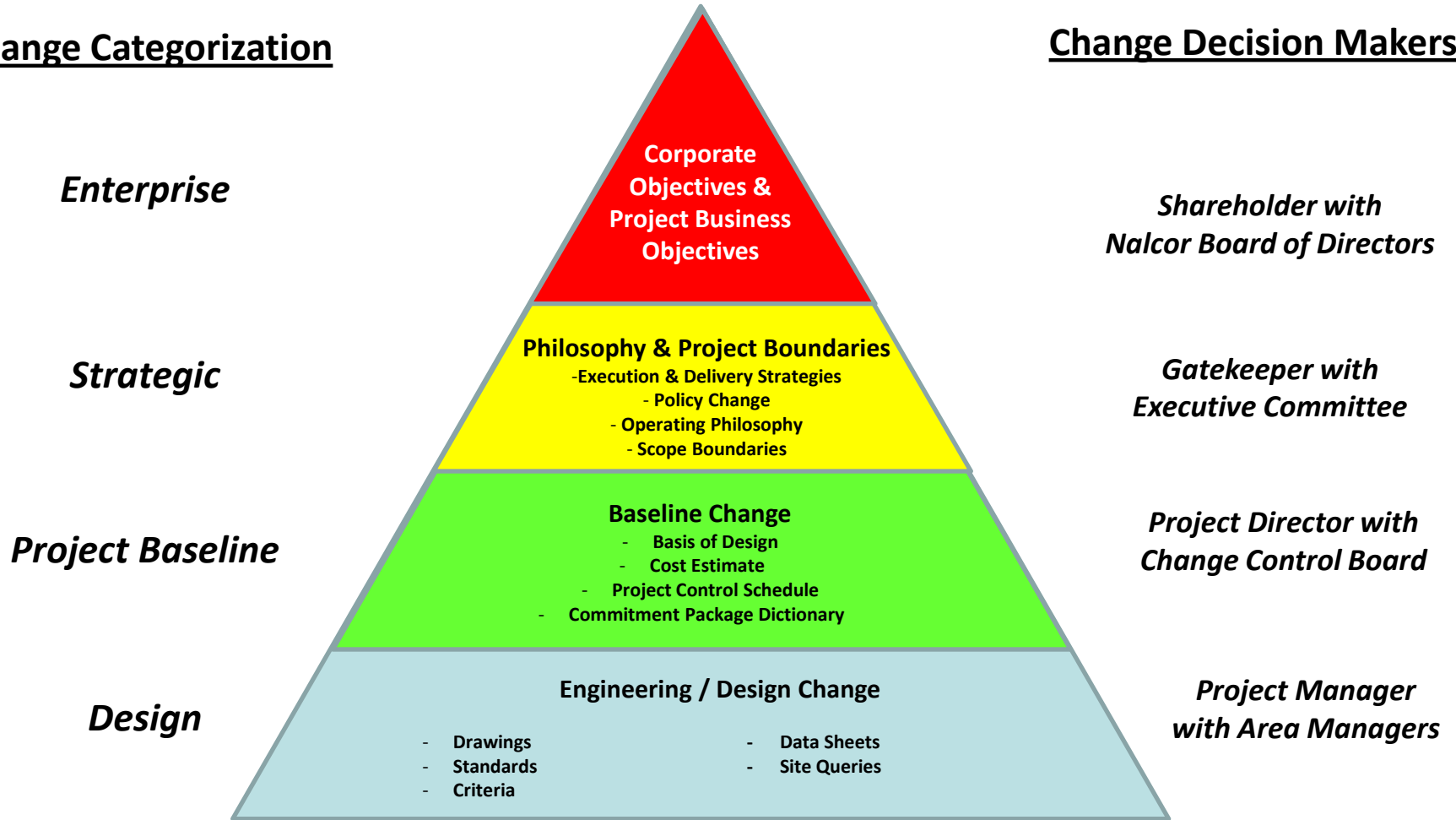
- Identify and report new potential trends
- Obtain updates on existing potential and verified trends



# Project Change Approval Hierarchy

Change Categorization

Change Decision Makers



# Master Authority for Expenditure (AFE)

# Master AFE's

(\$ Million)	Musktrat Falls	LITL	LTA	Total
Nalcor Owners Team and Administration	172.6	211.8	17.0	401.4
EPCM Services	213.8	136.0	75.3	425.1
Procurement and Construction Works	2,262.4	2,138.7	541.1	4,942.2
Legal and Commercial Costs	12.8	5.6	1.9	20.3
Environmental, Lands, Permitting & Aboriginal Affairs	45.2	27.2	0.7	73.1
Insurance	8.3	15.1	0.6	24.0
Contingency	186.0	75.4	55.0	316.4
<b>DG3 Capital Cost Estimate <sup>(1)</sup></b>	<b>2,901.2</b>	<b>2,609.7</b>	<b>691.6</b>	<b>6,202.5</b>
Add: Total Project Debt Financing <sup>(2)</sup>	74.3	83.2	8.2	165.7
<b>MASTER AFE VALUE (excluding IDC)</b>	<b>2,975.5</b>	<b>2,692.9</b>	<b>699.8</b>	<b>6,368.2</b>
Less Approved Funding to Date per pre sanction AFE LCP 2012-02:				
Capital costs excluding financing costs	260.9	116.9	36.6	414.4
Financing costs (IDC excluded)	8.3	9.6	0.9	18.9
<b>New Funding Requested <sup>(3)</sup></b>	<b>2,706.3</b>	<b>2,566.3</b>	<b>662.2</b>	<b>5,934.8</b>

- 1) Master AFE's align with (and equal) the DG3 capital cost estimate.
- 2) Project Debt Financing Costs exclude Interest during Construction and return on equity. Supplemental AFE's incorporating interest during construction and return on equity will be presented for Board of Directors approval upon financial close.
- 3) Excludes any funding related to Maritime Link or LCP Phase II (Gull Island). This funding is managed through the annual budget process.

# Master AFE's

- Master AFE's were approved by the Nalcor Energy and LIL General Partner Corporation Boards at the January 18, 2013 Board of Director's meeting
- Project work, covered under the Master AFE's will be:
  - carried out under the authority of the President and CEO; as granted by the Board's approval of the Master AFE's
  - performed within the confines of the work scope outlined in the Master AFE's
- Work entailing scope changes outside the boundaries of a Master AFE or increases in the overall anticipated total cost of a Master AFE will require further authorization by the Board of Directors.

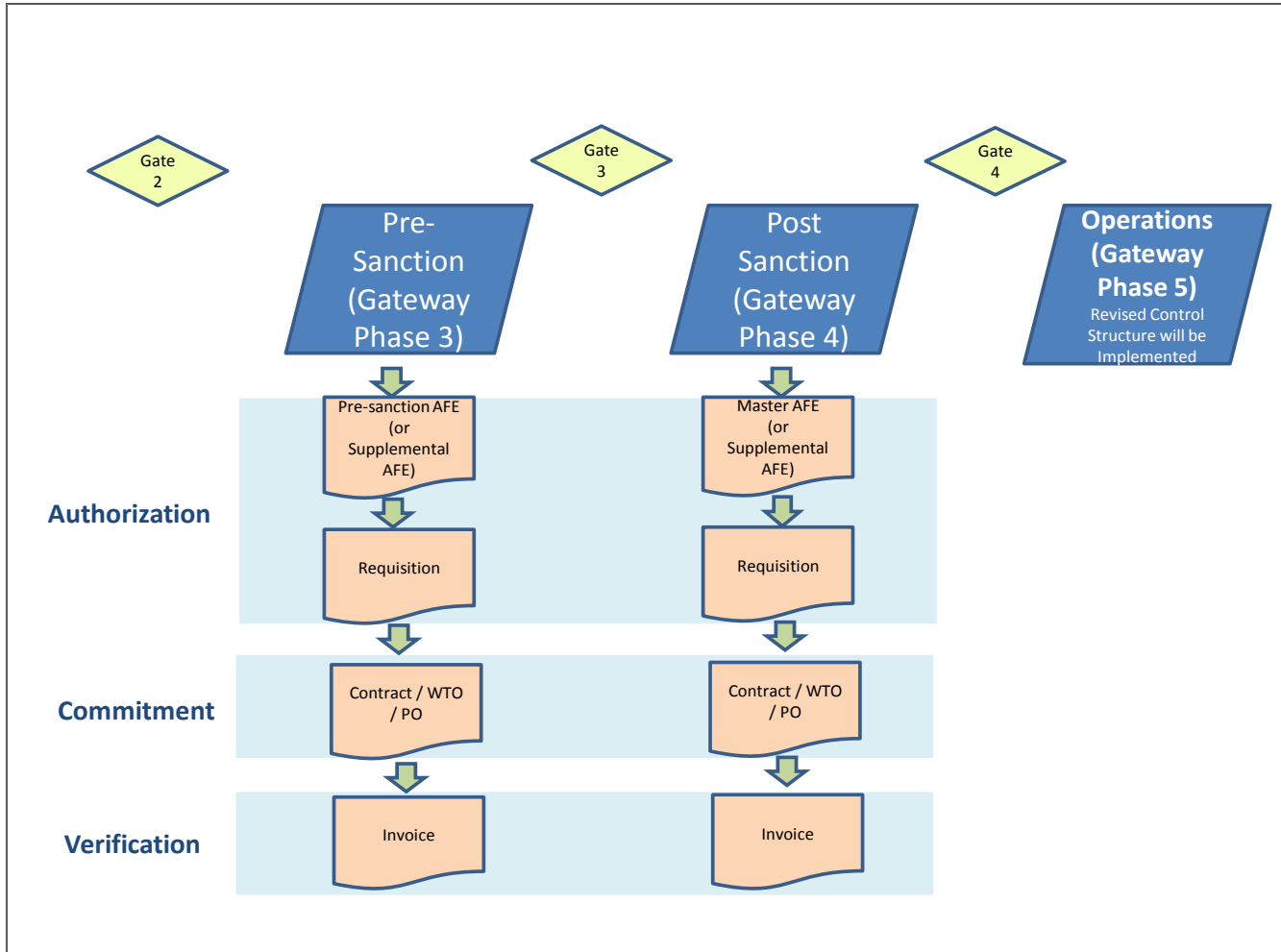
# Capital Expenditure Authorization

# Principles

- Outline authority limits and controls associated with financial Authorization, Commitment and Verification
- Establish financial authority limits commensurate with the **normal day-to-day activities** associated with responsibilities of the position
- Restrict application of Authorization authority to Budget Holder's work scope, contained within the scope of an approved Master AFE.
- Scopes of work or services will not be segregated (i.e. order splitting) in order to circumvent the approval process and this procedure.
- Align with Supply Change Management processes in achieving effective financial control over authorization of expenditures

# Application

Incorporates three (3) levels of authority:



# Application

## Authorization (Authority to proceed)

- Master AFE approval (or supplemental approvals) - restricted to the Board of Directors
- Requisition approval (up to the Master AFE value) - delegated to the CEO
- CEO delegates an adequate level of authority to Project senior management
- Authorization authority is further delegated to Budget Holders, in accordance with the Capital Expenditure Approval Procedure.



# Application

## Authorization (Authority to proceed)

Application to the Supply Chain process:

- Award Recommendation (Requisition) is approved by the Budget Holder responsible for the planned work scope and where necessary, the manager with sufficient Authorization authority will approve the award recommendation based on the estimated value of the work
- All single source justifications must be approved by the Budget Holder (and as necessary, the manager with sufficient Authorization authority), Supply Chain Manager and Project Director

# Application

## Commitment (Commercial Execution)

- Execution of Financial Commitments must be preceded by an approved Requisition, along with completion of (and compliance with) business processes and controls outlined in:
  - Procurement Management Plan
  - Contract Due Diligence Procedure
  - Capital Expenditure Authorization Procedure
- All Financial Commitments are executed by both the LCP Supply Chain Manager and the LCP Budget Holder responsible for the work scope and budget covered by the Financial Commitment.

# Application

## Verification (Invoice Attest)

- Verification entails both financial and technical verification, along with Budget Holder approval
  - A) Financial Verification**
    - Verification that the invoice is properly documented and is in compliance with the related Financial Commitment (contract/PO) and the **appropriate** Budget Holder has approved the invoice.
  - B) Technical Verification**
    - Verification of quantities received, quality and overall work progress or milestone achievement.
  - C) Budget Holder Approval**
    - Approved subject to successful completion of Financial and Technical Verification
    - Budget Holders cannot approve invoices that will result in the cumulative value of invoices for the Financial Commitment to be greater than the approved Requisition associated with the Financial Commitment.

# CEO AAL Matrix (POST-SANCTION)

LOWER CHURCHILL PROJECT - APPROVAL AUTHORITY LIMITS MATRIX  
 POST-SANCTION  
 (\$,000 CDN)

	Ref. #	Board of Directors	President & CEO	VP LCP & VP Finance & CFO (Note 4)	VP LCP	VP Finance & CFO	Project Director
<b>AUTHORIZATION AUTHORITY</b>							
Pre-Sanction AFE	A1	Unlimited					
Master AFE	A2	Unlimited					
Supplemental AFE	A3	Unlimited					
Requisition in respect of:	A4						
- Award Recommendation (Contract/PO)	C1.3		AFE Total	100,000	50,000	10,000	35,000
- Variation (Note 1)	C1.5		AFE Total	100,000	50,000	10,000	35,000
- Single Source (Note 2)	C1.4		AFE Total	-	25,000	7,500	15,000
- Work Task Orders (Note 3)	C1.6, C1.7		AFE Total	-	10,000	5,000	7,500
- Personnel Authorization Assignment (EPCM Contract)	C1.7		AFE Total	-	10,000	-	7,500
<b>COMMITMENT AUTHORITY</b>							
Contract/PO/WTO/PAA/Variation execution	C1	Execution must be preceded by an approved Requisition, along with completion of (and compliance with) business processes and controls outlined in: a) Procurement Management Plan b) Contract Due Diligence Procedure c) Capital Expenditure Authorization Procedure All Financial Commitments are executed by both the LCP Supply Chain Manager and the LCP Budget Holder responsible for the work scope and budget covered by the Financial Commitment					
Corporate purchase card	C2	Restricted to \$1,000 per transaction by those who have been assigned these cards (travel can be charged to the card without value restriction and subject to an approved travel requisition.)					
<b>VERIFICATION AUTHORITY</b>							
Approval of invoices associated with Financial Commitments	V1	Budget Holder approval: - Subject to acceptable financial and technical verification - Limited to the value of the Financial Commitment					

**Note 1:**  
 Approval of each Variation will be based on the cumulative value of the Requisition associated with the Financial Commitment subject to Variation.

**Note 2:**  
 All Single Source justifications must also be approved by the Project Director and the Supply Chain Manager.

**Note 3:**  
 Each Work Task Order must represent a discrete scope of work and be associated with a Master Services Agreement. Level of approval authority for revised Work Task Orders is determined by the cumulative value of the Work Task Order.

**Note 4:**  
 Where either an Award Recommendation or Variation resulting in a revised Requisition is valued between \$50,000M and \$100,000M, it will require approval from both the VP LCP and the VP Finance & CFO.

**Note 5:**  
 Permanently delegated authority should be commensurate with normal activities associated with responsibilities of the position. Permanent delegation should not be greater than 75% of the authority of the delegator.  
 Temporary delegation can be assigned up to 100% of the authority of the delegator and should not exceed one month in duration.

# CEO AAL Matrix (POST-SANCTION)

LOWER CHURCHILL PROJECT - APPROVAL AUTHORITY LIMITS MATRIX  
POST-SANCTION  
(\$,000 CDN)

	Ref. #	Board of Directors	President & CEO	VP LCP & VP Finance & CFO (Note 4)	VP LCP	VP Finance & CFO	Project Director
<b>AUTHORIZATION AUTHORITY</b>							
Pre-Sanction AFE	A1	Unlimited					
Master AFE	A2	Unlimited					
Supplemental AFE	A3	Unlimited					
Requisition in respect of:	A4						
- Award Recommendation (Contract/PO)	C1.3		AFE Total	100,000	50,000	10,000	35,000
- Variation (Note 1)	C1.5		AFE Total	100,000	50,000	10,000	35,000
- Single Source (Note 2)	C1.4		AFE Total	-	25,000	7,500	15,000
- Work Task Orders (Note 3)	C1.6, C1.7		AFE Total	-	10,000	5,000	7,500
- Personnel Authorization Assignment (EPCM Contract)	C1.7		AFE Total	-	10,000	-	7,500
<b>COMMITMENT AUTHORITY</b>							
Contract/PO/WTO/PAA/Variation execution	C1	Execution must be preceded by an approved Requisition, along with completion of (and compliance with) business processes and controls outlined in: a) Procurement Management Plan b) Contract Due Diligence Procedure c) Capital Expenditure Authorization Procedure All Financial Commitments are executed by both the LCP Supply Chain Manager and the LCP Budget Holder responsible for the work scope and budget covered by the Financial Commitment					
Corporate purchase card	C2	Restricted to \$1,000 per transaction by those who have been assigned these cards (travel can be charged to the card without value restriction and subject to an approved travel requisition.)					
<b>VERIFICATION AUTHORITY</b>							
Approval of invoices associated with Financial Commitments	V1	Budget Holder approval: - Subject to acceptable financial and technical verification - Limited to the value of the Financial Commitment					

**Note 1:**  
Approval of each Variation will be based on the cumulative value of the Requisition associated with the Financial Commitment subject to Variation.

**Note 2:**  
All Single Source justifications must also be approved by the Project Director and the Supply Chain Manager.

**Note 3:**  
Each Work Task Order must represent a discrete scope of work and be associated with a Master Services Agreement. Level of approval authority for revised Work Task Orders is determined by the cumulative value of the Work Task Order.

**Note 4:**  
Where either an Award Recommendation or Variation resulting in a revised Requisition is valued between \$50,000M and \$100,000M, it will require approval from both the VP LCP and the VP Finance & CFO.

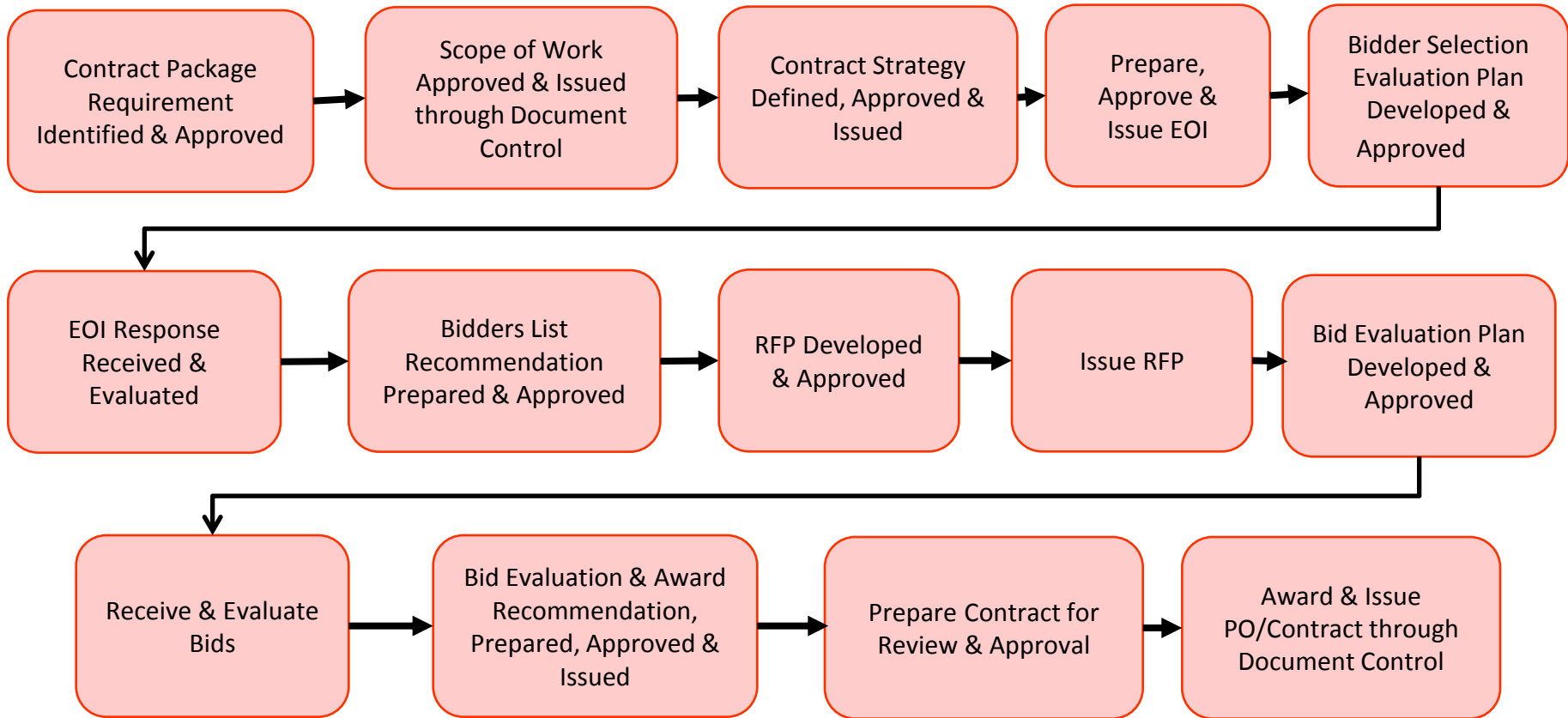
**Note 5:**  
Permanently delegated authority should be commensurate with normal activities associated with responsibilities of the position. Permanent delegation should not be greater than 75% of the authority of the delegator.  
Temporary delegation can be assigned up to 100% of the authority of the delegator and should not exceed one month in duration.

  
Approved  
Ed Martin  
President & CEO

Date January 16, 2013

# Procurement Controls

# LCP Procurement Process



# Key Control Points

- Contract Package list is developed and approved
- Bidder Selection Evaluation Plan is developed and approved prior to evaluation of questionnaires
- Bidder List Recommendation prepared and approved prior to RFP being issued
- Bid Evaluation Plan is developed and approved prior to proposals being opened and evaluated
- Bid Evaluation and Award Recommendation prepared, approved and issued
- Contract is prepared, reviewed and approved prior to issue to Contractor



# Process Integrity

- Bidders are requested to submit commercial and technical proposals separately
- Bidders submit proposals via a sealed bid process
- Bid evaluation plan must be approved prior to bid opening
- Bid receipt and opening recorded by commercial team only
- Commercial team evaluates commercial proposal in isolation of other team members (i.e. technical, H&S, QA, benefits, finance, legal etc.)

# Process Integrity

- Bid clarifications held with bidders; bid clarification meetings held as required; commercial clarifications kept separate from technical
- Bid commercial documents are secured. Larger packages are evaluated in secure rooms with controlled access
- Due diligence is applied to all contract recommendations with corporate cold eyes review teams engaged per the LCP Approval Matrix for Key Procurement Recommendations

# Basis of Contracting and Purchasing

- Full and fair opportunity
- International competitive bidding process
- Nalcor and SNC must adhere to provisions of:
  - Impacts and Benefits Agreement with Labrador Innu
  - NL Benefits Strategy
  - NL/NS Benefits Memorandum of Understanding

# Bidder Selection Process

- Post packages on Nalcor and SNC websites
- Post Expression of Interest / Bidder Selection Questionnaires for each package
- Identify potential suppliers from various sources
- Potential suppliers complete and submit questionnaires
- Evaluate questionnaire responses
- Bid list determined based on criteria
- Bid list posted on Nalcor and SNC websites

# Invoice Processing & Controls

# Invoice Process and Control

- All invoices will be paid on time, subject to the contractor submitting a correct (prepared and documented) invoice.
- Invoices go through an extensive attest process comprising both financial and technical verification and are approved for payment by the Budget Holder (e.g. Verification Authority)
  - Detailed Attest procedures have been developed and documented outlining the attest process of Project invoices.
- Processing of invoices is coordinated by Finance & Accounting (F&A)
  - F&A takes ownership from the point that invoices are received until they are paid
  - Invoice status is constantly maintained in a tracking log by F&A
  - All necessary verification steps are completed by F&A or personnel engaged by F&A to participate in the Attest process (e.g. Supply Chain, Package Leaders, Area Managers, Project Controls)

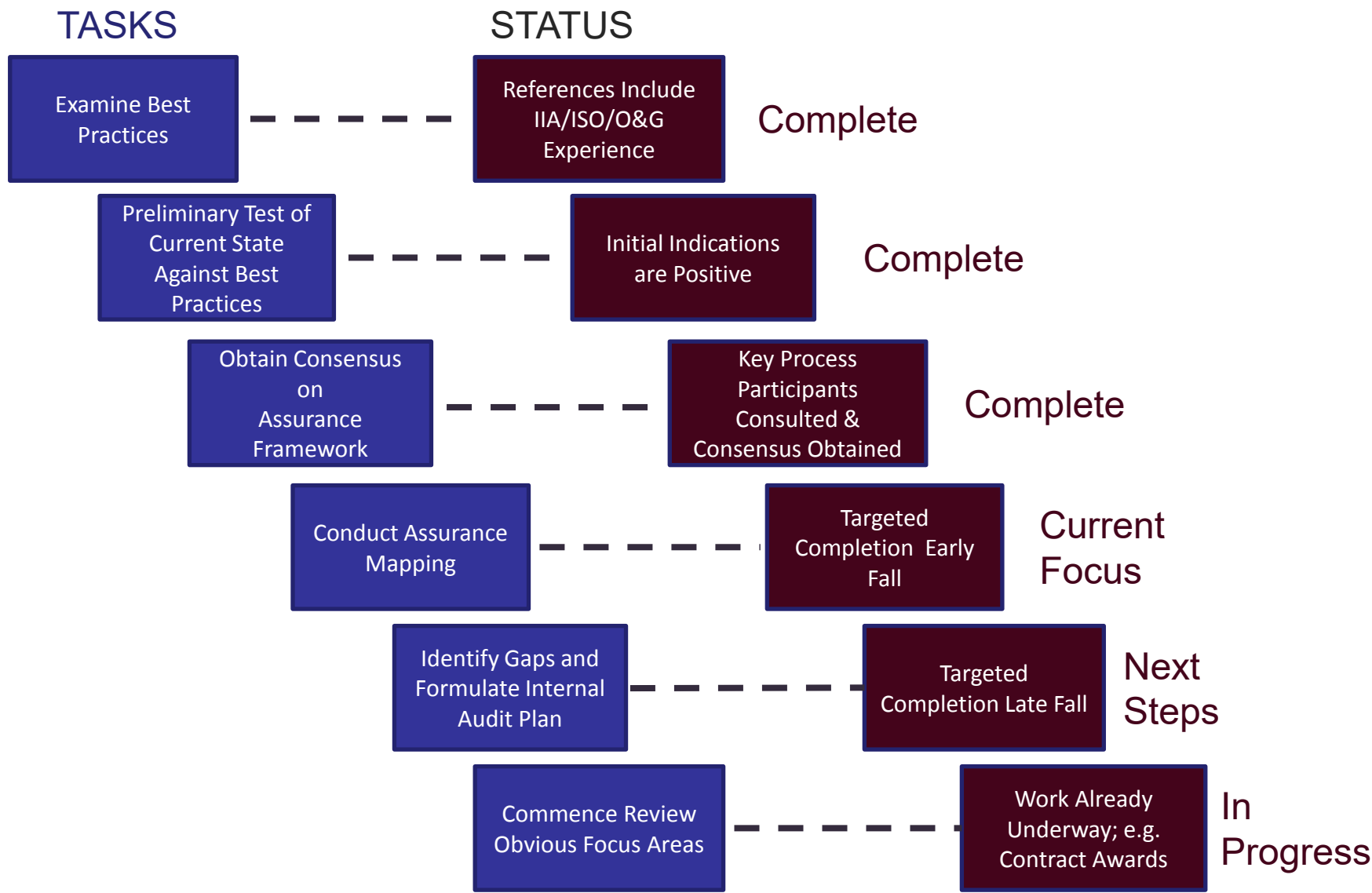
# Internal Audit Assurance Framework

# Key Messages

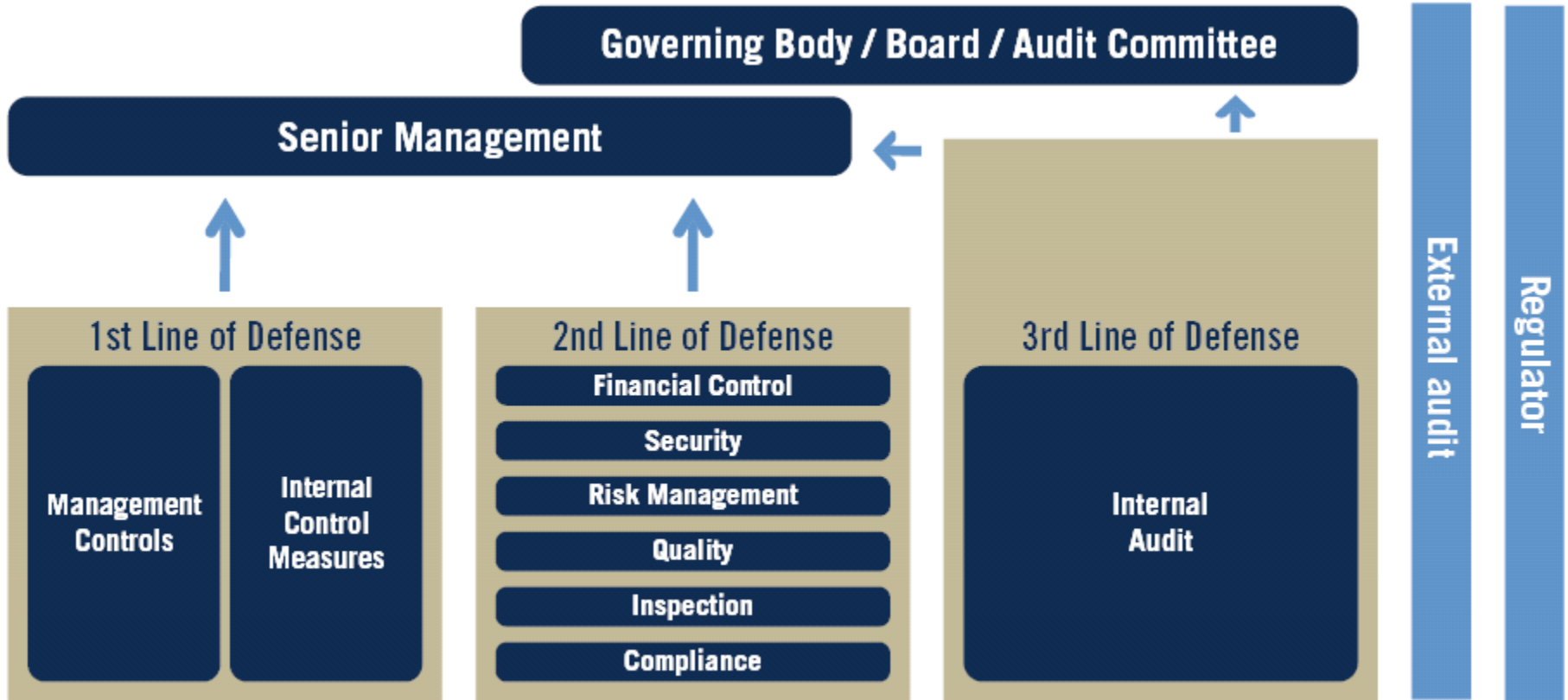
- Internal Audit has accountability for determining whether the organization's network of risk management, control, and governance processes is adequate and functioning as intended
- A proper assurance framework contemplates multiple layers of control and providers of assurance
- Internal Audit acts as a coordinator to ensure effectiveness of the assurance function and to avoid duplication of effort
- Nalcor's assurance framework is consistent with best practices for ensuring an independent assessment of governance, risk management, and control processes for the Project



# Critical Task List & Status



# Generic Assurance Framework Per the IIA



Reprinted from the Institute of Internal Auditors Position Paper dated January 2013 entitled; "The Three Lines of Defense in Effective Risk Management and Control".

# 1<sup>st</sup> Line – Initial Assessment Against Best Practices

- Management systems have been created for the Project in major control areas consistent with best practices
- Coverage was examined in the context of the KPMG Construction Controls Framework and ISO 9001:2008 standards
- Further examination required to test the robustness of the systems created, but preliminary indications are positive

# 1<sup>st</sup> Line - Control Systems – Best Practices Comparison

KPMG CONSTRUCTION CONTROLS FRAMEWORK		LCP MANAGEMENT PLAN STRUCTURE	
FOCUS AREA	SUB FOCUS	MANAGEMENT PLAN	QA ASSURANCE PROCEDURE (ISO 9001:2008 Compliant)
<b>Program Strategy Organization and Administration</b>	Project Strategy & Authorization	Project Execution Plan/Project Governance/Project Charter/Work Plans and Authorization Plan	5.3 Quality Policy / 5.4.1 Project Objectives
	Policies & Procedures	<i>Note: Outlined under each Management Plan</i>	4.2 b Documentation Requirements
	Project Management Reporting	Information Services	7.5.1 Project Management
	Communications Plan	Communications and Stakeholder Relations Plan	5.5 Responsibility, Authority and Communication
	Roles & Responsibilities	<i>Note: Outlined in all Management Plans</i>	5.5 Responsibility, Authority and Communication
	Project Planning & Integration Management	Interface Management/Project Technical Interface Management Plan/Handover to Operations and Project Closure	7.1 Project Planning / 7.3.4 Design Review
	Project Infrastructure	Management Plan/Operations and Maintenance Plan/Information Technology Project Systems Plan	6.3 Infrastructure
	Document Management	Information Management Plan	4.2.3 Control of Documents
<b>Cost &amp; Financial Management</b>	Budgeting	Project Controls Management Plan	7.5.1 Estimating
	Payment Processing & Administration	Project Finance and Accounting Management Plan/Administration Management Plan	7.5.1 Cost Control
	Project Cost Reporting	Project Controls Management Plan/Project Finance and Accounting Management Plan	7.5.1 Cost Control
	Estimating & Contingency Management	Project Controls Management Plan	7.5.1 Estimating
	Forecasting	Project Controls Management Plan/Project Finance and Accounting Management Plan	7.5.1 Cost Control
	Variance Analysis	Project Controls Management Plan	7.5.1 Cost Control
	Project Cost Coding	Project Controls Management Plan	7.5.1 Cost Control
	Cash Flow Reporting	Project Finance and Accounting Management Plan	7.5.1 Cost Control
	Value Engineering	Engineering Management Plan	7.3.2 Design Inputs
	Historical Trend Analysis	Project Controls Management Plan	7.5.1 Cost Control

# 1<sup>st</sup> Line - Control Systems – Best Practices Comparison

KPMG CONSTRUCTION CONTROLS FRAMEWORK		LCP MANAGEMENT PLAN STRUCTURE	
FOCUS AREA	SUB FOCUS	MANAGEMENT PLAN	QA ASSURANCE PROCEDURE (ISO 9001:2008 Compliant)
<b>Procurement Management</b>	Solicitation	Procurement Management Plan	7.4 Procurement
	Source Selection	Procurement Management Plan	7.4 Procurement
	Contracting & Contracting Standards	Procurement Management Plan	7.4 Procurement
	Contract Administration	Contract Administration Plan	7.4 Procurement
	Procurement Planning	Procurement Management Plan	7.4 Procurement
	Solicitation Planning	Procurement Management Plan	7.4 Procurement
	Contract Negotiation	Procurement Management Plan	7.4 Procurement
	Contract Closeout	Procurement Management Plan	TBD
	Materials management	Procurement Management Plan	7.4.3 Verification of Purchased Product or Services
<b>Project Controls &amp; Risk Management</b>	Change Management	Construction Management Plan/Project Change Management Plan	7.3.7 Control of Design Changes / 7.5.1 Cost control
	Risk Management	Project Risk Management Plan/Risk Management Plan	7.2 Proposal and Contract Review
	Design Standards and Specifications	Engineering Management Plan	7.3.2 Design Inputs
	Regulatory Compliance	Regulatory Compliance Plan	7.3.2 Design Inputs
	Project Self Assessment and Lessons Learned	Overarching Quality Management Plan/Human Resources and Organizational Effectiveness	8.2.3 Monitoring and Measurement of Processes / 8.5.2 Corrective Action
	Compliance Auditing	Overarching Quality Management Plan	8.2.2 Internal audits / 8.5.2 Corrective Action
	Project Site Security	Security Management Plan	HS Site Procedures
	Quality Control and Inspection	Overarching Quality Management Plan	7.5.1 Quality Assurance
	Environmental, Health and Safety	Environmental Management Plan/Health and Safety Management Plan	Environment Project Procedures
<b>Schedule Management</b>	Schedule Development Standards and Processes	Project Controls Management Plan	7.5.1 Planning and Scheduling
	Schedule Change management	Project Change Management Plan	7.5.1 Planning and Scheduling
	Schedule Management Process	Project Controls Management Plan	7.5.1 Planning and Scheduling
	Schedule Integration	Project Controls Management Plan/Completion and Commissioning Management Plan	7.5.1 Planning and Scheduling

## 2<sup>nd</sup> Line – Initial Assessment Against Best Practices

- Comprehensive Management Plans in place to govern activities of assurance providers
- Management Plans examined are well documented
- Based on ISO Standards in some cases
- Main focus to date has been on contractual compliance and work in that regard is ongoing
- QA audit plans being formulated (expected delivery date May/13)
- Risk-based approach
- Conclusion: Elements of 2<sup>nd</sup> line are in place and well documented to facilitate audit review

# 2<sup>nd</sup> Line – Participants & Coverage

ASSURANCE PROVIDERS	AUDIT FOCUS AREAS				
Quality Assurance	MF/LTA/LIL Control Systems	Suitability, adequacy and effectiveness of all control systems	Adherence to NE-LCP governing policies, objectives and targets	Identification of opportunities for improvement to control systems	Contracts - Conformance to approved Quality Plan and compliance with contractual agreements
Environment	Effectiveness of the Environmental Management Plan (EMP)	Degree of conformity during construction with EMP	Success of EMP implementation		
Health & Safety	Evaluate the success of H&S Management Plan implementation	Effectiveness of the H&S Management Plan	Conformity during construction with the H&S Management Plan		
Finance	Appropriateness of contractor charges to the Project	Effective and efficient processing of all charges to the Project	Appropriate allocation of financial costs		
Independent Process Review	Project readiness of people, processes & tools to pass through Decision Gate 3.	Produce observations, recommendations and a gap closure plan.	Audit focus is on key deliverables as defined in the Decision Gate 3 Key Deliverables List..		
Independent Engineer	Review the principal aspects of the engineering design, cost and scheduling estimates	Review the technical provisions in the principal Project contracts and permits	During construction, review the engineering, procurement, construction and testing and commissioning phase of the Project		
External Auditors	Validity of charges to the capital project	Appropriate classification of charges as capital			

RISK MANAGEMENT

## 3<sup>rd</sup> Line – Initial Assessment Against Best Practices

Nalcor's internal audit function is consistent with best practices in the following respects:

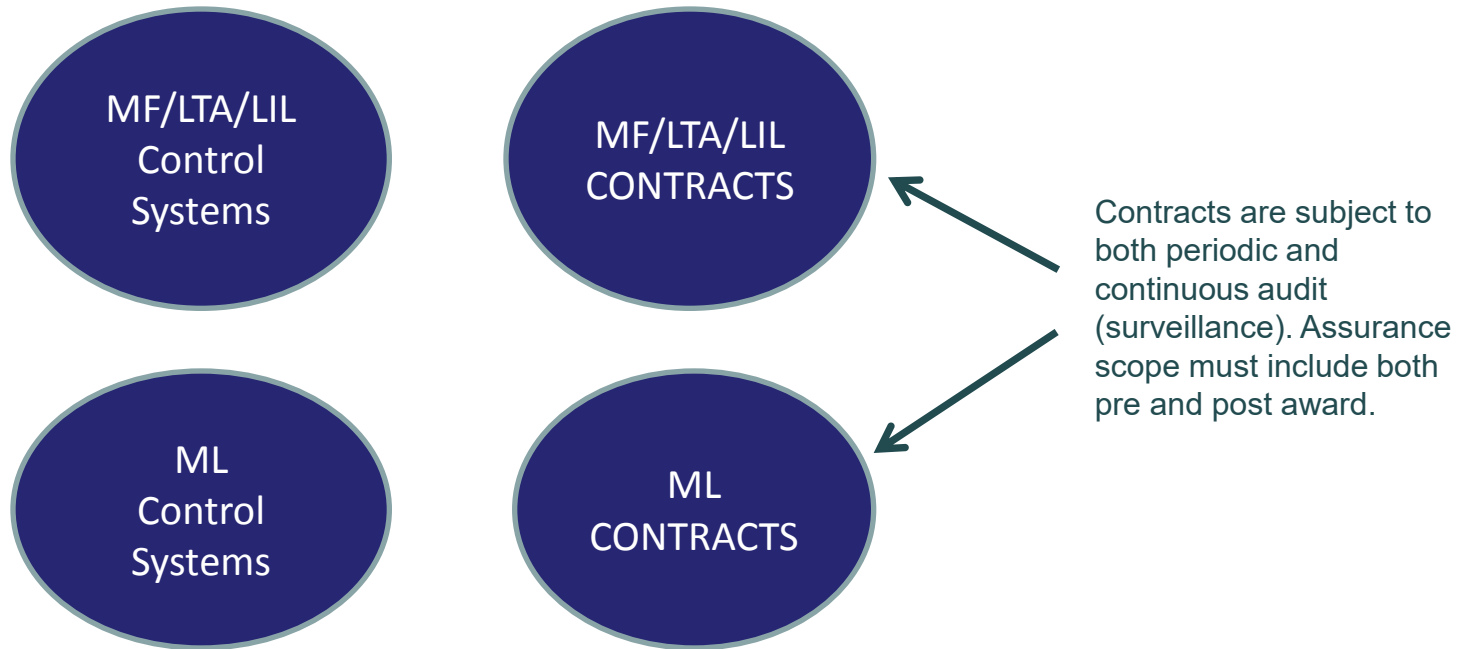
- Independence and objectivity of the internal audit function is assured through its direct reporting relationship with the Board
- Audit processes are well documented and designed in accordance with IIA professional standards
- Internal audit maintains a robust quality assurance program that includes both internal quality assurance activities as well as independent assessments of quality of the internal audit function by qualified third parties



## 3<sup>rd</sup> Line - Internal Audit Role

- Internal audit provides assurance over the entire organization but relies on the work of other assurance providers
  - The degree of reliance will be impacted by such factors as the qualifications of the assurance provider, the robustness of their audit strategy/plan, procedures and execution practices
  - These factors will require testing by internal audit if reliance is to be placed on the work of the assurance provider
- IIA IPPF Standard 2050 – “The chief audit executive should share information and coordinate activities with other internal and external providers of assurance and consulting services to ensure proper coverage and minimize duplication of efforts.”
- The board uses multiple sources to gain reliable assurance
- The level of assurance desired and who should provide that assurance will depend on the level of risk
- Coordination of assurance efforts is critical to effective governance, risk management and control
- Internal audit best positioned to lead that “coordination” effort
- A comprehensive audit plan will be finalized following completion of assurance mapping phase and will benefit from input from 2<sup>nd</sup> line assurance providers

# LCP Audit Universe



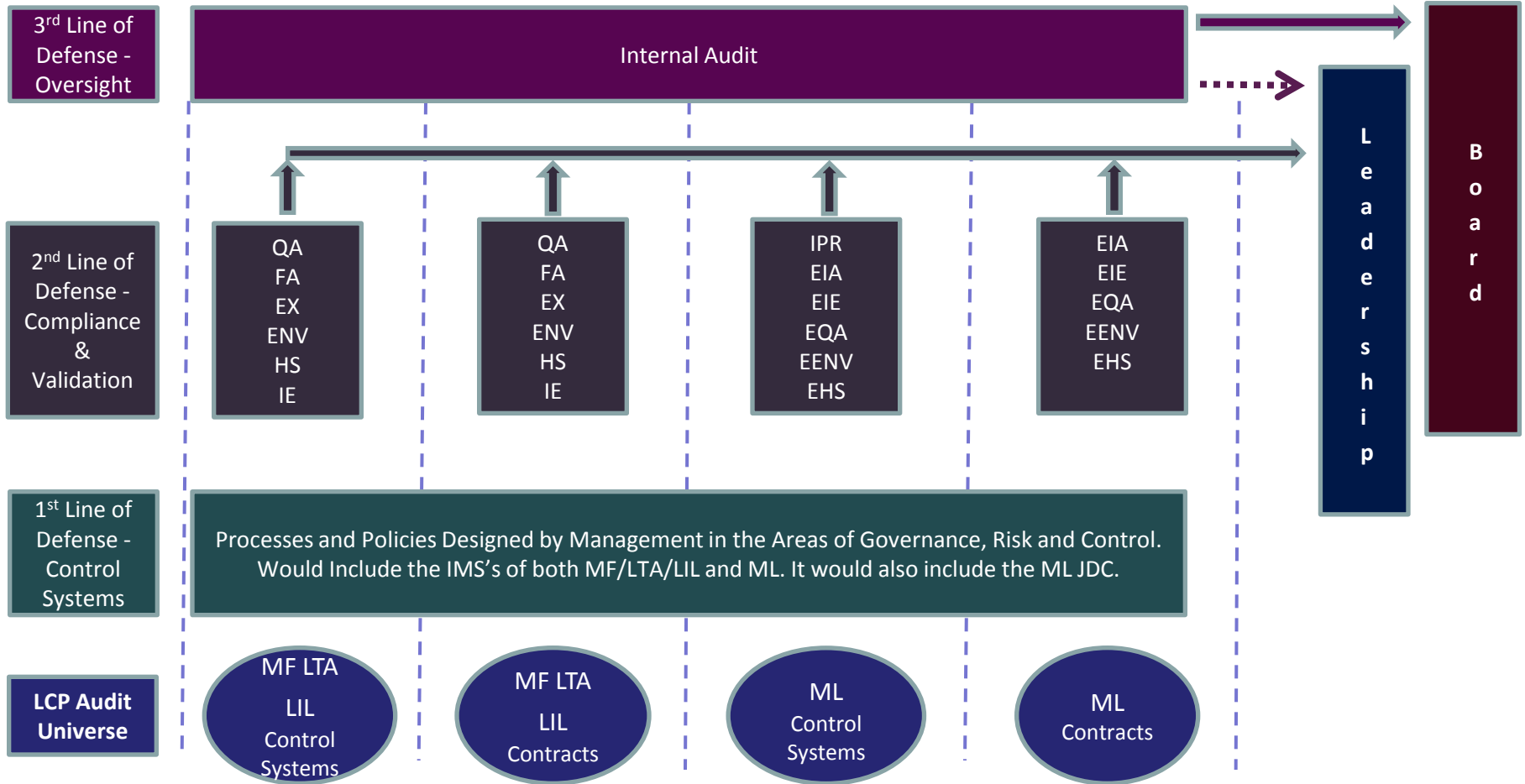
MF/LTA/LIL – Muskrat Falls/Labrador Transmission Asset/Labrador Island Link  
 ML – Maritime Link

# Assurance Map – MF/LTA/LIL Control Systems (Example 1)

	QA Risk Rating	IA Inherent Risk Rating	Primary Assurance Providers
<b>Project Governance</b>	Not rated	M	IA/FA/EX
<b>Project Charter</b>	Not rated	H	IA
<b>Project Execution</b>	Not rated	H	IE/IA
<b>Engineering Management</b>	H	H	QA/IE
<b>Project Change Management</b>	H	H	QA/IE
<b>Contract Administration</b>	H	M	QA
<b>Procurement Management</b>	H	M	QA/FA
<b>Construction Management</b>	H	H	QA/IE
<b>Completion and Commissioning Management</b>	H	M	QA/IE
<b>Handover to Operations and Project Closure</b>	H	M	QA/IE
<b>Operations and Maintenance</b>	H	M	QA/IE
<b>Information Management</b>	M	M	QA
<b>Project Controls Management</b>	M	M	QA
<b>Work Plans and Authorization</b>	M	M	QA
<b>Overarching Quality Management</b>	L	M	IA/QA/IE
<b>Administration Management</b>	L	L	QA
<b>Industrial Relations</b>	L	M	IA/QA
<b>Human Resources and Organizational Effectiveness</b>	L	L	QA
<b>Benefits and Training</b>	L	L	QA
<b>Environment Management</b>	L	M	ENV/IA
<b>Health and Safety Management</b>	L	M	HS/IA
<b>Security Management</b>	L	L	QA
<b>Information Technology Project Systems</b>	L	L	QA
<b>Project Finance and Accounting</b>	L	M	FA/IA/EX
<b>Communications and Stakeholder Relations</b>	L	M	IA/QA
<b>Interface Management</b>	H	H	QA/IE
<b>Risk Management</b>	M	M	IA/QA
<b>Information Services</b>	Not rated	L	IA

IA – NE Internal Audit	FA – LCP Finance & Accounting	EX – External Audit	QA – LCP Quality Assurance	QA – Quality Assurance
ENV – LCP Environmental Services	HS – LCP Health & Safety	IE – Independent Engineer		

# LCP Assurance Framework - In Summary



# External Audit

# Role of External Audit

- Deloitte is retained as External Auditor ("EA") for all entities within the Nalcor group of companies
- In 2012 / 2013, Management worked extensively with the EA to develop sound financial reporting positions in relation to Nalcor's LCP related arrangements
- The EA designs audit procedures commensurate with the risk level associated with particular areas / functions within the business.
  - It is expected that LCP will remain a significant area of focus for Deloitte throughout the life of the project.
- While the purpose of the external audit is not to opine on issues related to controls and/or processes, significant deficiencies notes by the EA during the course of their audit will be reported to Management and/or the Audit Committee

# Other Considerations

# Other Considerations

- Monthly LCP reports
  - Benefits reporting currently made available to the public on Nalcor website
  - Provision of LCP monthly reports to GNL similar to those provided to Nalcor Leadership/Board
- Nalcor CFO certification relating to NL equity contributions
  - Currently in draft form
- Independent engineer reports
  - Canada now engaged with IE through reliance agreement
  - All reporting provided to Canada and Nalcor under established scope of work could be provided to GNL
- Year end external audit reports for new LCP entities



# Questions?

# Appendix A: LCP Expenditure Reporting (Sample)

# NE-LCP Phase I 2013 Cost Curve

