

# Audit & Resource Plan

## Internal Audit

### 2015 - 2019

Boundless Energy



# Presentation Purpose

1. To outline basis for the Internal Audit Five Year Audit Plan for the period 2015 – 2019
2. To outline details of the Internal Audit Five Year Audit Plan for the period 2015 – 2019
3. To outline resource utilization
4. To obtain approval for the Five Year Internal Audit Plan as presented

# Key Messages

1. Audit universe updated to reflect organizational chart changes and latest risk register information
2. Universe items brought into audit plan based on risk ranking and using statistical sampling consistent with certainty levels previously approved by the Audit Committee
3. Ongoing presence in regional areas assured
4. Resourcing considered adequate to execute on audit plan

# Basis for Plan as Presented



# Nalcor Energy – Audit Universe



Note: Evaluation of Internal Control based on COSO Integrated Framework

# Audit Universe

Audit universe managed and updated by:

- Conducting interviews
- Reviewing various documents including:
  - Organization charts
  - RACI Charts
  - FM Global Risk Database
  - Information Systems work plan
  - ERM Risk Registers

# Audit Planning

- Risk based approach to the selection of “universe” items for inclusion in the Audit Plan
- Audit items risk ranked utilizing Nalcor Energy ERM Toolset
- 5 Year Planning Window
- Linkage to the COSO Internal Control Framework
- Broad focus on governance, risk, control & compliance
- Opportunities to provide consultative services also explored

# Audit Focus – Inherent Risk

## NALCOR ENERGY Risk Rating Matrix

- Audit focus area
- Items outside this area will not be ignored, but will have lesser coverage

IMPACT*				
Insignificant	Minor	Moderate	Major	Extreme
1	2	3	4	5
An event that has virtually no impact.	An event that could be considered as minor and of no lasting consequence.	An event that causes a disruption in performance levels without suspending operations	An event that results in substantial losses and that forces a suspension of certain operations for a period of time, or that permanently compromises the ability to realize one or more Corporate goals.	A catastrophic event that forces the suspension of all operations over a sustained time frame, perhaps permanently.

LIKELIHOOD	Almost Certain	5	>90%	Almost inevitable that this event will occur unless circumstances change	Low	Medium	High	High	High
	Likely	4	>50% to 90%	Likely to occur in most circumstances	Low	Medium	Medium	High	High
	Possible	3	1% to 50%	Might occur under certain circumstances	Low	Low	Medium	Medium	High
	Unlikely	2	0.01% to < 1%	Remote possibility of occurrence	Low	Low	Medium	Medium	Medium
	Rare	1	< 0.01%	Rare or Extremely Improbable - An unusual combination of factors would be required for the event to occur	Low	Low	Low	Low	Medium

\* For further guidance in the assessment of impact, refer to the Impact Measurement Tool and also the Financial Impact Matrix.

# Statistical Overlay - Definitions

- Confidence Level – Specifies the reliability of the sample. For example, 95% confidence in the sample would suggest it would likely be wrong only one time in 20.
- High Error Rate(Upper Error Limit) - Specifies the error rate we wish to prove is not exceeded in the population.
- Expected Error Rate - Specify the percentage error rate expected in the population. This is the maximum amount of errors we are willing to accept in the population without detection.

# Audit Selection Non-LCP

- High Risk – All high risk universe items selected
- Focus Area Medium Risks - Items are statistically selected based on confidence parameters agreed upon by the Audit Committee in 2013, namely: 95% confidence, 15% high error rate and 5% expected error rate
- Outside Focus Area - Medium Risks - Items are statistically selected based on confidence parameters agreed upon by the Audit Committee in 2013, namely: 70% confidence, 15% high error rate and 5% expected error rate
- Low Risks - Items are statistically selected based on confidence parameters agreed upon by the Audit Committee in 2013, namely: 60% confidence, 20% high error rate and 5% expected error rate

# Audit Selection LCP

- High Risk – All high risk universe items selected
- Medium Risks - Inclusion in the plan is generally driven by a consideration of the stage that the project is in and the related exposure associated with the audit item in question.
- Low Risk Items - Excluded

# Time Estimates & Available Resources



# Audit Types

AUDIT TYPE	CHARACTERISTICS	OBJECTIVES
Recurring Audit (RA)	Mandatory and that occur at regular intervals	Effectiveness of controls/procedural compliance
Operational Audit (OA)	Focused on a particular operational area as indicated in corporate organization charts	<ul style="list-style-type: none"> <li>Assessment of one or more internal control components</li> <li>Ensure visibility of Internal Audit in regional offices on a regular basis</li> </ul>
Joint Venture Audit (JV)	Occurs at given intervals based on contractual audit rights	Verification of charges to the joint account over a given timeframe
Process Audit (PR)	Examination of processes spanning corporate lines	Assess process efficiency and effectiveness in context of best practices
Risk Audits (RR)	Risk areas as identified in the corporate risk registers	Assess appropriateness of risk rating and the effectiveness of related management strategy
Consulting Engagements (CN)	Generally involve the rendering of counsel, advice, facilitation or training in the areas of governance, risk or control (GRC).	To add value by highlighting opportunities for GRC improvements thereby enabling the achievement of corporate objectives
LCP Functional Areas	Management plans & related procedures/templates governing the management of the Lower Churchill Project in key functional areas for LTA/LIL/MF/ML	Assessment of effectiveness, efficiency & general compliance
LCP Contracts	Service and supply contracts with contractors in respect to the LTA/LIL/MF/ML	Examine contractor compliance with contractual provisions; also examine contract administration management plan compliance in connection with contracts examined.

# Time Estimates by Audit Type

AUDIT TYPE	Hourly Time Estimate Per Audit	BASIS FOR TIME ESTIMATE
<b>NON LCP ITEMS</b>		
Recurring Environmental Audit (RA) – Mandatory and that occur at regular intervals	120	Historical Results
Recurring Purchasing Card Audit (RA) – Mandatory and that occur at regular intervals	150	Reduction in hours possible with risk-based audit approach
Operational Audit (OA) – Focused on a particular operational area as indicated in corporate organization charts	200	Historical results adjusted for revised COSO based approach re internal control
Oil & Gas JV Audit (JV)	300	Scaled back as historical stats skewed by first White rose audit. Put more in line with operational audit time.
Process Audit (PR) – Focus on the efficiency and effectiveness of corporate processes as identified in the RACI database contained on the Grid	300	Based on professional judgment. Broader than an operational audit.
Risk Audits (RR) – Examine risks as identified in the corporate risk registers for appropriateness of risk rating and the effectiveness of related management strategy	60	Historical Results
Consulting Engagements (CN)	TBD	Depends on the nature of the engagement
External Audit Assistance	600	Historical results with LCP transactional testing now done by Deloitte.
<b>LCP ITEMS</b>		
<b>Functional Management Plans – Examine efficiency &amp; effectiveness</b>		
Initial Review	200	Based on recent experience
Ongoing Compliance	30	Based on recent experience
<b>Contracts – Contractor Compliance</b>		
Initial Review	50	Based on recent experience
Ongoing Compliance	20	Based on recent experience
<b>Risk Register Items - Validate Risk Ranking &amp; Test Risk Mgt. Strategy</b>		
Estimate 5 Key Risks @ 20 Hours Per	100	Based on recent experience

# Available Hours

	<u>Mgr</u>	<u>PM</u>	<u>JB</u>	<u>SW</u>	<u>COOP</u>	<u>DW</u>	<u>AB</u>	<u>JC</u>	<u>TOTALS</u>
<b>AVAILABLE HOURS</b>									
Per year	1950	1950	1950	1950	1755	1950	1950	1950	15405
Floaters	15	15	15	15		15	15	15	105
Family Resp	0	23	23	23		23	23	23	135
Annual	113	210	150	210		113	113	113	1020
Stats	98	98	98	98	68	98	98	98	750
Training	118	118	118	118	176	118	118	118	998
Admin	1286	1041	542	372	605	555	396	396	5193
<b>NET AVAILABLE</b>	<b>322</b>	<b>446</b>	<b>1006</b>	<b>1116</b>	<b>907</b>	<b>1030</b>	<b>1189</b>	<b>1189</b>	<b>7204</b>

Note: Admin time for PM (Snr. Internal Auditor) driven by assistance and support of departmental initiatives, team competency mapping & gap analysis, IT strategy support and management of the department's Quality Assurance and Improvement Program (QAIP).

# QUESTIONS?

# APPENDIX A

## Plan Detail

# Work Hours/Resourcing Summary

	2015	2016	2017	2018	2019
<b>Nalcor Energy</b>	1,093	1,921	1,955	2,093	2,875
<b>NL Hydro</b>	1,127	1,610	1,679	2,369	2,093
<b>CF(L)Co</b>	736	759	759	460	437
<b>Oil &amp; Gas</b>	414	989	483	966	690
<b>Bull Arm</b>	230	69	69	0	0
<b>Energy Marketing</b>	173	69	460	138	0
<b>Pre LCP Subtotal</b>	<b>3,772</b>	<b>5,417</b>	<b>5,405</b>	<b>6,026</b>	<b>6,095</b>
<b>LCP - MF/LIL/LTA Mgt Plan</b>	1,742	748	748	748	748
<b>LCP - MF/LIL/LTA Contracts</b>	863	414	414	0	0
<b>LCP - ML Mgt Plan</b>	483	265	265	265	265
<b>LCP - ML Contracts &amp; Risk</b>	288	288	288	115	0
<b>LCP Risk Register</b>	115	115	115	115	115
<b>LCP Subtotal</b>	<b>3,490</b>	<b>1,829</b>	<b>1,829</b>	<b>1,242</b>	<b>1,127</b>
<b>GRAND TOTALS</b>	<b>7,262</b>	<b>7,245</b>	<b>7,234</b>	<b>7,268</b>	<b>7,222</b>
<b>Available Resources</b>	7,204	7,204	7,204	7,204	7,204
<b>Shortfall</b>	58	41	29	64	18
<b>FTE</b>	0.1	0.0	0.0	0.1	0.0

## NOTES

1. The reduction in LCP workload in 2016 is largely the result of the fact that a certain amount of reliance can be placed on previous audit work in respect to both Management Plans and Contracts.
2. For LCP work in 2017, it is assumed that workload will be on par with that in 2016.
3. LCP work in 2018 & 2019 assumes time allotment to ready for operations and ongoing oversight of new operating companies.
4. Contingency Allowance 10%
5. Follow-up Allowance 5%
6. Contingency & Follow-up Factor 15%

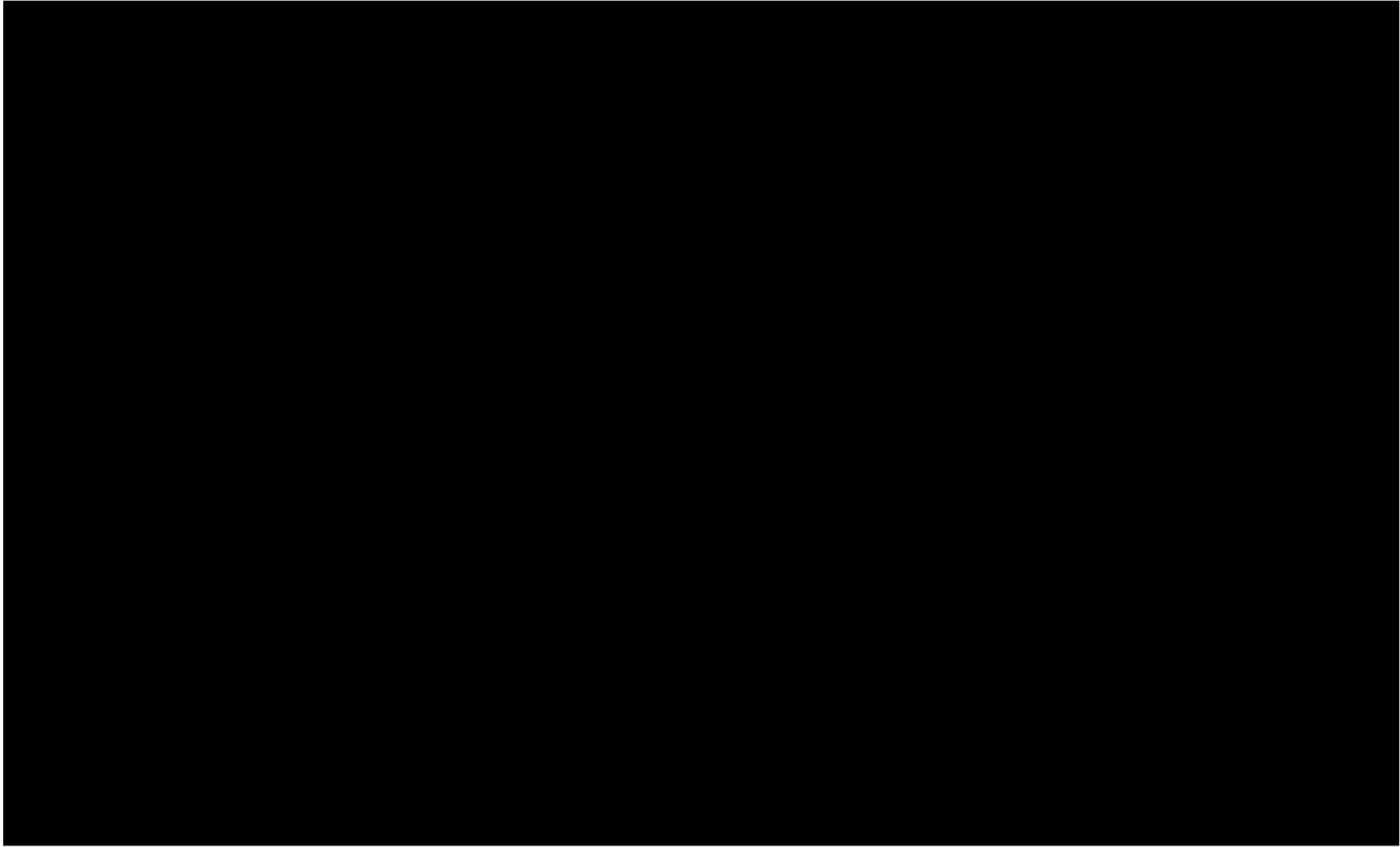
# Audit Time Allocation

	<b>2014 % Allocation</b>	<b>2015 % Allocation</b>	<b>5 Yr % Allocation Grand</b>
<b>Nalcor Energy</b>	7%	15%	27%
<b>NL Hydro</b>	14%	16%	25%
<b>CF(L)Co</b>	10%	10%	9%
<b>Oil &amp; Gas</b>	5%	6%	10%
<b>Bull Arm</b>	1%	3%	1%
<b>Energy Marketing</b>	0%	2%	2%
<b>Pre LCP Subtotal</b>	<b>37%</b>	<b>52%</b>	<b>74%</b>
<b>LCP - MF/LIL/LTA Mgt Plan</b>	27%	24%	13%
<b>LCP - MF/LIL/LTA Contracts</b>	13%	12%	5%
<b>LCP - ML Mgt Plan</b>	9%	7%	4%
<b>LCP - ML Contracts &amp; Risk</b>	4%	4%	3%
<b>LCP Risk Register</b>	9%	2%	2%
<b>LCP Subtotal</b>	<b>63%</b>	<b>48%</b>	<b>26%</b>
<b>GRAND TOTALS</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

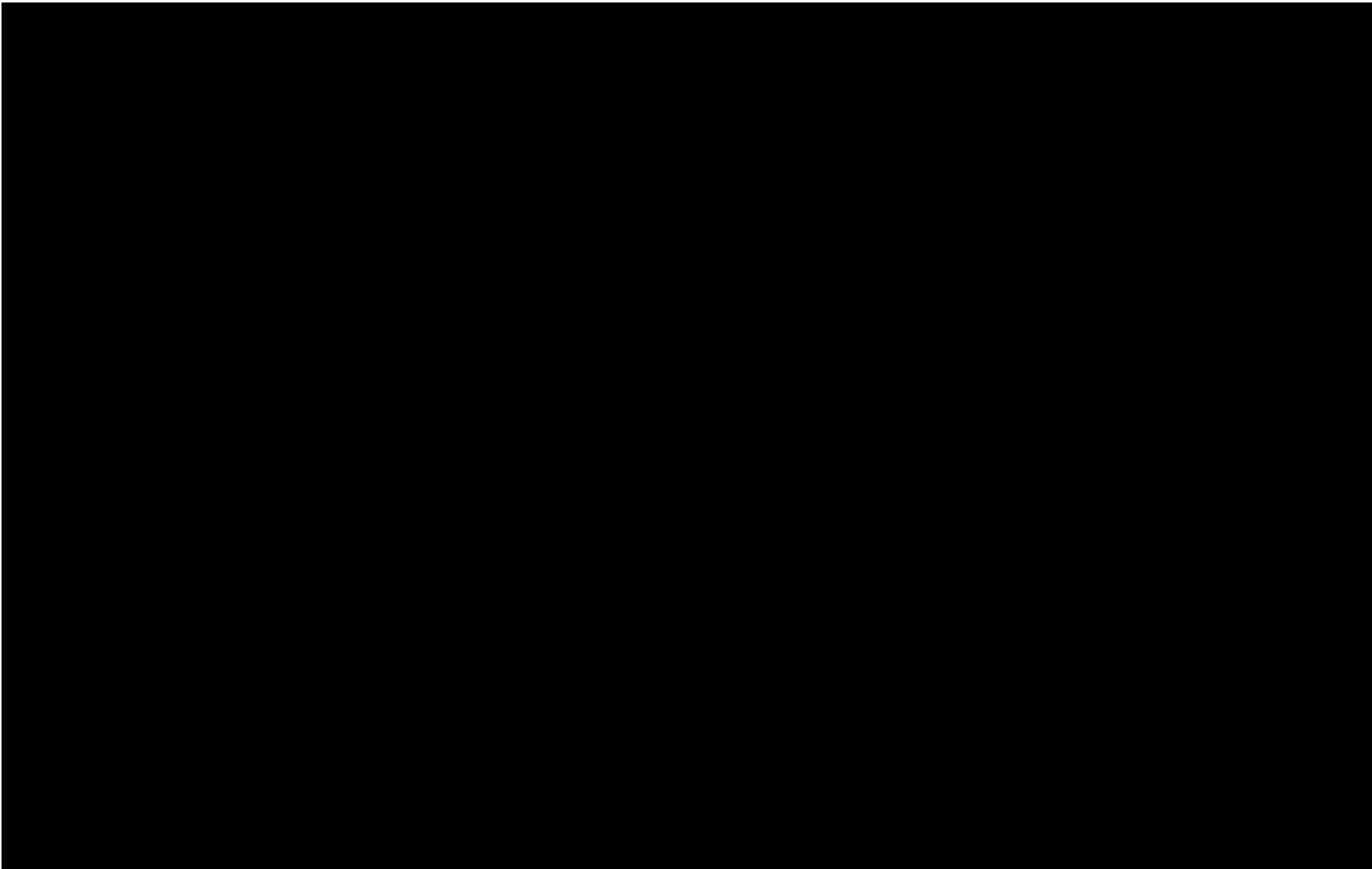
# Plan Detail – Nalcor Energy

ID	Risk or Audit Area	Risk Level	Audit Year				
			2015	2016	2017	2018	2019
IA-OA55	System Planning	High	200				
IA-RA01	Executive Purchasing Card Review	Low	150	150	150	150	150
IA-RA05	Purchasing & Vehicle Cards	Low		300			300
IA-OA02	Corporate Relations	Medium				200	
IA-OA02a	Corporate Planning	Medium					200
IA-OA35	Corporate Treasurer	Medium					200
IA-OA37	Investment Evaluation	Medium					200
IA-OA50	Safety & Health	Medium				200	
IA-OA79	Office of Asset Management	Medium			200		
IA-OA89	Corporate Controller	Medium				200	
IA-OA92	Controller - NLH	Medium		0	200		
IA-OA93	Rates & Regulation - NLH	Medium			200		
IA-PR02	Development of Engineering design standards	Medium		300			
IA-PR08	Environmental Management Process	Medium			300		
IA-PR70	Risk Management - Process Review -	Medium		300			
IA-OA01	General Counsel & Corporate Secretary	Medium				200	
IA-OA55	Environmental Services	Medium				200	
IA-OA80	Project Execution - Regulated	Medium	200				
IA-PR10	Environmental Protection Planning	Medium				200	
IA-PR11	Employee Opinion Survey	Medium					300
IA-PR80	Environmental Reporting	Medium					300
IA-RA07	Corporate Governance	Medium		120		120	
IA-RAOA28	Financial Reporting	Medium	200				200
IA-RAOA15	IT focus areas	Medium	200	200	200	200	200
IA-CN01	Ongoing consultative engagements (Energy Marketing for 2015)	Medium		150	150	150	150
IA-RAPR07	Financial Reporting Process	Medium			300		300
NLH-RR104	Contracts/Regulatory Governance & Accountability	Medium		150			
	Total Estimated Hours		950	1670	1700	1820	2500
	Contingency & Followup		143	251	255	273	375
	Total Hours Allocated		1093	1921	1955	2093	2875

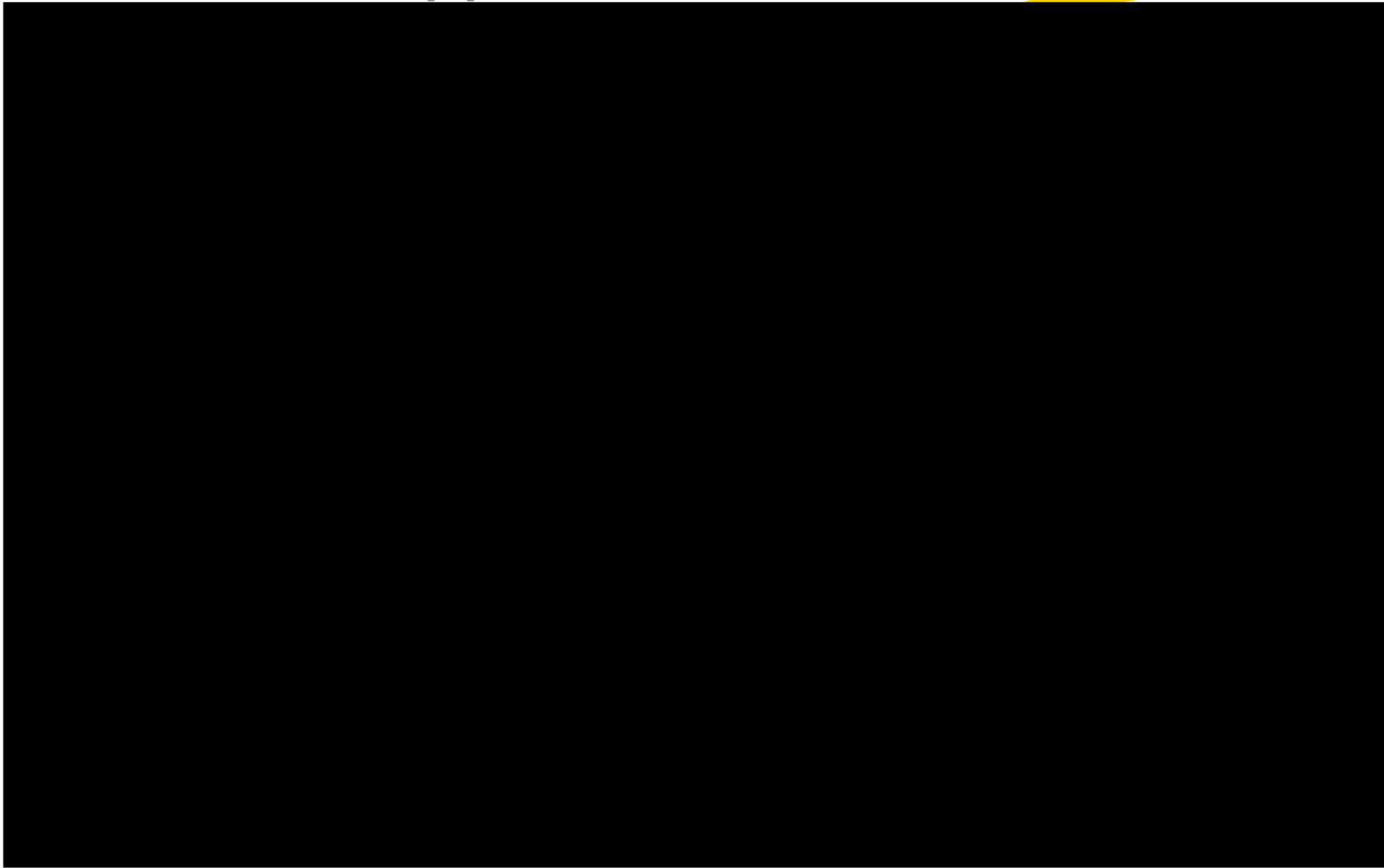




# Plan Detail – NLH (cont.)



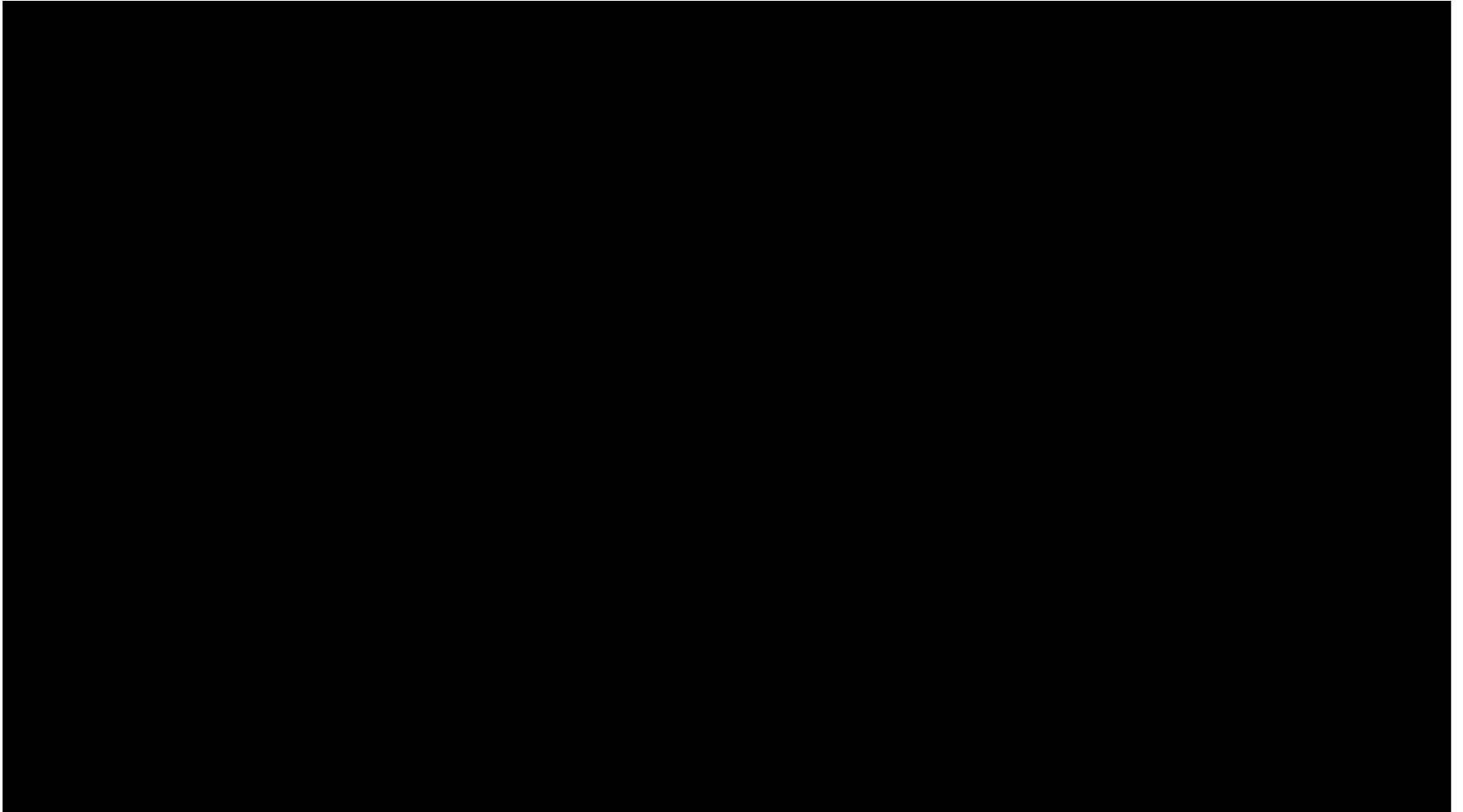
# Plan Detail – CF(L)Co



# Plan Detail – Oil & Gas



# Plan Detail – Bull Arm Fab



# Plan Detail – Energy Marketing



# Plan Detail – LCP Management Plans

Category	Audit Project	Inherent Risk	# of Budgeted Audit Hrs 2015	# of Budgeted Audit Hrs 2016
LCP Contracts	Intake, Powerhouse, Spillway & Transition Dams	H	20	20
LCP Contracts	Construction of Reservoir Clearing North Bank	H	50	20
LCP Contracts	Supply and Install Turbines and Generators	H	20	20
LCP Contracts	Supply and Install Powerhouse Hydro-Mechanical Equipment	H	20	20
LCP Contracts	Construction of 350 kV HVdc Transmission Line - Section 1	H	20	20
LCP Contracts	HVDC Cable Design S&I	H	20	20
LCP Contracts	Supply of Isolated Phase Bus	H	50	20
LCP Contracts	Provision of Laboratory Services	H	50	20
LCP Contracts	S&I Converters&cable transition compounds	M	50	20
LCP Contracts	Construction of Construction Power Facilities	M	50	20
LCP Contracts	North Spur Stabilization	M	50	20
LCP Contracts	North & South Dam	M	50	20
LCP Contracts	Supply and Install Powerhouse Cranes	M	50	20
LCP Contracts	Construction of 315 kV HVac Transmission Line (MF to CF)	M	50	20
LCP Contracts	Supply of Power Transformers, AC Substations at CF, MF and SP	M	50	20
LCP Contracts	Supply of Tower Hardware - 350kV HVdc	M	50	20
LCP Contracts	Supply of Anchor Materials - 350 kV HVdc	M	50	20
LCP Contracts	Physical Hydraulic Modeling	M	50	20
LCP Mgmt Plans	Construction Management Plan	H	200	30
LCP Mgmt Plans	Engineering Management Plan	H	200	30
LCP Mgmt Plans	Project Execution Plan (Approach & Scope)	H	200	30
LCP Mgmt Plans	LCP Integrated Environmental Management Plan	M	200	30
LCP Mgmt Plans	Project Finance & Accounting Management Plan	M	30	30
LCP Mgmt Plans	Project Change Management Plan	H	30	30

# Plan Detail – LCP Contracts

Category	Audit Project	Inherent Risk	# of Budgeted Audit Hrs 2015	# of Budgeted Audit Hrs 2016
LCP Mgmt Plans	Health and Safety Management Plan	M	30	30
LCP Mgmt Plans	Project Control Management Plan	M	75	30
LCP Mgmt Plans	Overarching Quality Management Plan	M	30	30
LCP Mgmt Plans	Project Risk Management Plan	M	30	30
LCP Mgmt Plans	Procurement Management Plan	M	200	30
LCP Mgmt Plans	Handover to Operations and Project Closure	M	0	200
LCP Mgmt Plans	Project Technical Interface Management Plan	H	30	30
LCP Mgmt Plans	Project Charter & Governance	H	200	30
LCP Mgmt Plans	Contract Administration Plan	M	30	30
LCP Mgmt Plans	Project Risk Management Plan	M	30	30
LCP Risk	5 top risks @ 20 hrs each	H	100	100
Emera Mgmt Plans	Technical Interface Management Plan	H	50	20
Emera Mgmt Plans	Maritime Link Project - Early Project Execution Plan	H	50	20
Emera Mgmt Plans	Project Charter	H	50	20
Emera Mgmt Plans	Project Charter for DG3	H	50	20
Emera Mgmt Plans	Interface Mgmt Plan	H	50	20
Emera Mgmt Plans	Management of Change Plan	H	50	20
Emera Mgmt Plans	Project Quality Mgmt System	M	20	20
Emera Mgmt Plans	Project Execution Risk Plan	M	50	20
Emera Mgmt Plans	Handover to Operations and Project Closure	M	0	50
Emera Risk	5 top risks @ 20 hrs each	H	100	100
Emera Contracts	TBD - Allow for 3 contracts	H	150	150
			3035	1590
	Contingency & Followup		455	239
	<b>Total</b>		<b>3490</b>	<b>1829</b>



A proud, diverse energy company, whose people are committed to building a bright future for Newfoundland and Labrador, unified by our core values.

## Teamwork

Sharing our ideas in an open and supportive manner to achieve excellence.

## Open Communication

Fostering an environment where information moves freely in a timely manner.

## Honesty and Trust

Being sincere in everything we say and do.

## Safety

Relentless commitment to protecting ourselves, our colleagues, and our community.

## Respect and Dignity

Appreciating the individuality of others by our words and actions.

## Leadership

Empowering individuals to help, guide and inspire others.

## Accountability

Holding ourselves responsible for our actions and performance.