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Cc: David Grassbaugh; Eric Briel; mcoish@nalcenergy.com; leonabarrington@nalcenergy.com; geraldhumphrey@nalcenergy.com
Subject: UPDATE: EPCM Mobilization Readiness Initiative
Attachments: Record of Meeting_Oct 20_2010.docx; Resolution for EPCM readiness_NALCOR.ppt

Many of you participated in the October 20 workshop hosted by David Grassbaugh and Eric Briel of Westney Consulting discussing what we can expect from the EPCM phase. This workshop, which from the feedback I have received appears to have been a very useful session, represented the kick-off of our EPCM Mobilization Readiness Initiative. Attached is a brief record of meeting from this session.

Since the workshop David and Eric have spent time reviewing our organization, current management plans, EPCM RFP, and various other documentation in order to get a better sense of our organization and our proposed execution approach. Additionally over the course of this week David had the opportunity to discuss your plans for managing your respective functional areas when the EPCM onboards. Armed with this information and the experience with EPCM arrangements, David and Eric have developed a plan of attack to position us at the desired level of readiness to mobilize the EPCM consultant(s) early in 2011. The attached slide deck provides some insight into their findings and recommended way forward.

Early this AM, David returned to Houston to coordinate with the broader Westney resource pool. He is planning to return on November 8 for about 3 - 4 weeks with us, while coordinating support / input from Houston. Over the next week David et al will be focussing on mapping the interfaces out between the various functional groups, with particular reference to the Coordination Procedures contained in the EPCM RFP. This information will facilitate them to guide us through the finalization of our Owner Management Plans; however please ensure you as Functional Managers / Leads continue to focus on your respective Management Plans. To quote David regarding the proposed approach for development of the Plans: *"Westney considers the act of producing plans more influential on staff behavior than the documents themselves, therefore, we have included time allowances for "socialization" of the plans in the proposed approach to facilitate the culture change Nalcor desires."*

We are planning to host an Alignment Workshop on November 15 or 16 with hopefully all of you in attendance. This session will assist the with the "socialization" aspect discussed above, as well as ensure alignment on Nalcor's Owner Management Philosophy for the Project.

I'd appreciate your continued cooperation and support as well move this vital initiative forward.

Regards,

Jason



Record of Meeting_Oct 20_2010.docx



Resolution for EPCM readiness_NALCOR.ppt



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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?

Record of Meeting

EPCM readiness meeting

October 20, 2010

Super 8 in St. John's, New Foundland

8:00 – 17:00 hours

Attendees

Paul Harrington	Project Manager
Jason Kean	Project Services Manager
Brad Chaulk	Manager Construction early works
Geoff Marshall	Electrical Engineering Lead
Raj Kaushik	Communications and Control Engineering
Judy Ludlow	Information Management lead
David Pardy	Project Controls lead
Lance Clarke	Manager Commercial services
Craig Freake	Project Controls coordinator
Mark Peddle	QA/QC Manager
Ron Power	Engineering Delivery Manager
Kyle Tucker	Transmission Engineering
Robert Besaw	Mechanical Engineering Lead
Bob Barnes	Engineering Manager
Tony Scott	Project Planner
Pat Hussey	Purchasing and Supply Chain Manager
Dave Brown	Civil Engineering Lead
Charles Cook	Accounts Payable
Catherine Rowsell	HR / Labor Relations
Eric Briel	Chief Operations Officer (Westney)
David Grassbaugh	Senior Executive Consultant (Westney)

Purpose

1. Awareness of owner roles and responsibilities for managing the EPCM consultant
2. Identification of a prioritized plan to ensure a level of readiness to mobilize the EPCM consultant

Agenda

EPCM context and awareness

- What does an EPCM environment look like
- Global lessons learned for EPCM's
- Group EPCM alignment activity
- What others are saying about us

Scenario Exercise

- How we will test for EPCM readiness gaps
- Group EPCM test scenario

Gap identification (People, Processes, Governance)

Path forward

NE-LCP team gut feel indicators – morning session

Team EPCM implementation concerns:

- Risk of starting off with wrong Owner/Consultant relationship
- Mutual understanding of roles and responsibilities (6)
- Alignment regarding how to direct / manage an EPCM consultant (4)
- Control of EPCM consultant (2)
- Mis-match of systems and skills (3)

Team EPCM opportunities:

- EPCM can bring the number of resources needed to staff the program (4)
- EPCM can bring specialized knowledge / skills needed by the program (7)
- EPCM can bring project processes to the program (4)
- EPCM can provide assurance of project competitiveness (1)

NE-LCP team assessment of program process readiness – Afternoon session

Overarching points

- Team is open to its readiness for the EPCM contract on the basis of People, Processes and Governance
- The Coordination procedure is the foundation of the relationship between NE-LCP and EPCM (supported by the Project Execution Plan / Governance / Project Charter)
- Reconciliation of the Project Delivery System procedure and documentation to become the basis for planning way forward
- A small number of project documents are fully mature enough for EPCM readiness

Qualitative assessment exercise score

1 = Lowest rating

5 = Highest rating

Project Process	People	Process	Governance
A1. Business Strategy and Planning	2	4	3
A2. Stakeholder Management	3	4	3
A3. Interface and Issues Management	2	2	2
A4. Program & Project Execution Planning	2	2	3
A5. Communications and Information Management	2	3	2
A6. Management of Project Scope and Change	3	2	2
A7. Value Improving Practices	2	3	2
A8. Continuous Improvement	2	3	2
A9. Risk Management	2	4	4
A10. Organizational Capability	2	2	3
A11. Contracting & Procurement Strategy	5	4	5
A12. Assurance	1	1	2
A13. Team Alignment	2	2	3
A14. Project Appraisal and Decision Making	5	5	5
B1. Technology and Design Management	3	4	4
B2. Procurement Management	3	3	4
B3. Construction Management	2	3	3
B4. Commissioning and Startup Management	2	3	4
C1. Environment, Health and Safety Management	1	2	1
C2. Cost Management	4	3	4
C3. Schedule Management	4	3	4
C4. Quality Management	2	2	3
C5. Operational Predictability	3	3	3

Visual material files: EPCM readiness review meeting_Morning_presentation .pptx

EPCM readiness review meeting_Afternoon_presentation.pptx

Nalcor Lower Churchill Project Resolution for EPCM readiness

St. John's, Newfoundland

October 2010

More granularity for slides 7-9 from Oct 20 meeting



- **Key owner roles and responsibilities**

- The basis for EPCM readiness

- The Philosophy behind Coordination Procedures

- Coordination Procedure / Management Plans
- Next steps

Best-practice objectives of the owner's team in an EPCM contract are usually grouped into 7 core competencies

1 HSE oversight

- Monitor compliance with HSE standards and raise issues with EPCM contractor
- Build safety culture by adopting and being visible on a "zero-tolerance" approach to site safety

2 Conduct QA/QC

- Conduct appropriate QA/QC to ensure that the vendor is delivering according to the terms of the contract and codes and regulations. For example, perform regular audits ensure quality standards are being followed

3 Manage the contract

- Perform contract management activities, including setting and verifying milestones, paying bills, settling disputes, and managing a robust and disciplined scope-change procedure

4 Risk management

- Maintain a risk register identifying overall project risks and actively track progress throughout all project phases
- Review EPCM risk mitigation proposals to ensure adequacy and revisit on a regular basis

5 Manage external relations

- Proactively communicate with external stakeholders, including shareholder, Board of Directors, regulators, special interest groups, local community, and the general public
- Build key relationships with local organizations in preparation for operations

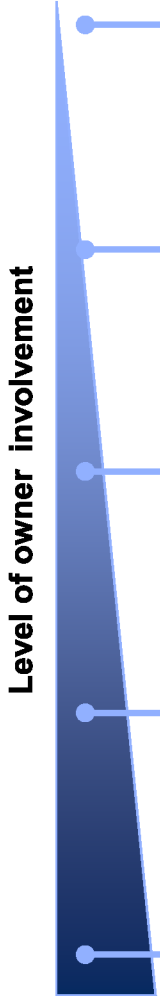
6 Prepare for operations

- Ensure development of an organization ready to operate the plant upon handover, including
 - Managing a comprehensive training program to license and prepare operators
 - Providing staff to begin to operate and maintain plant systems and components as they are turned over

7 License the plant

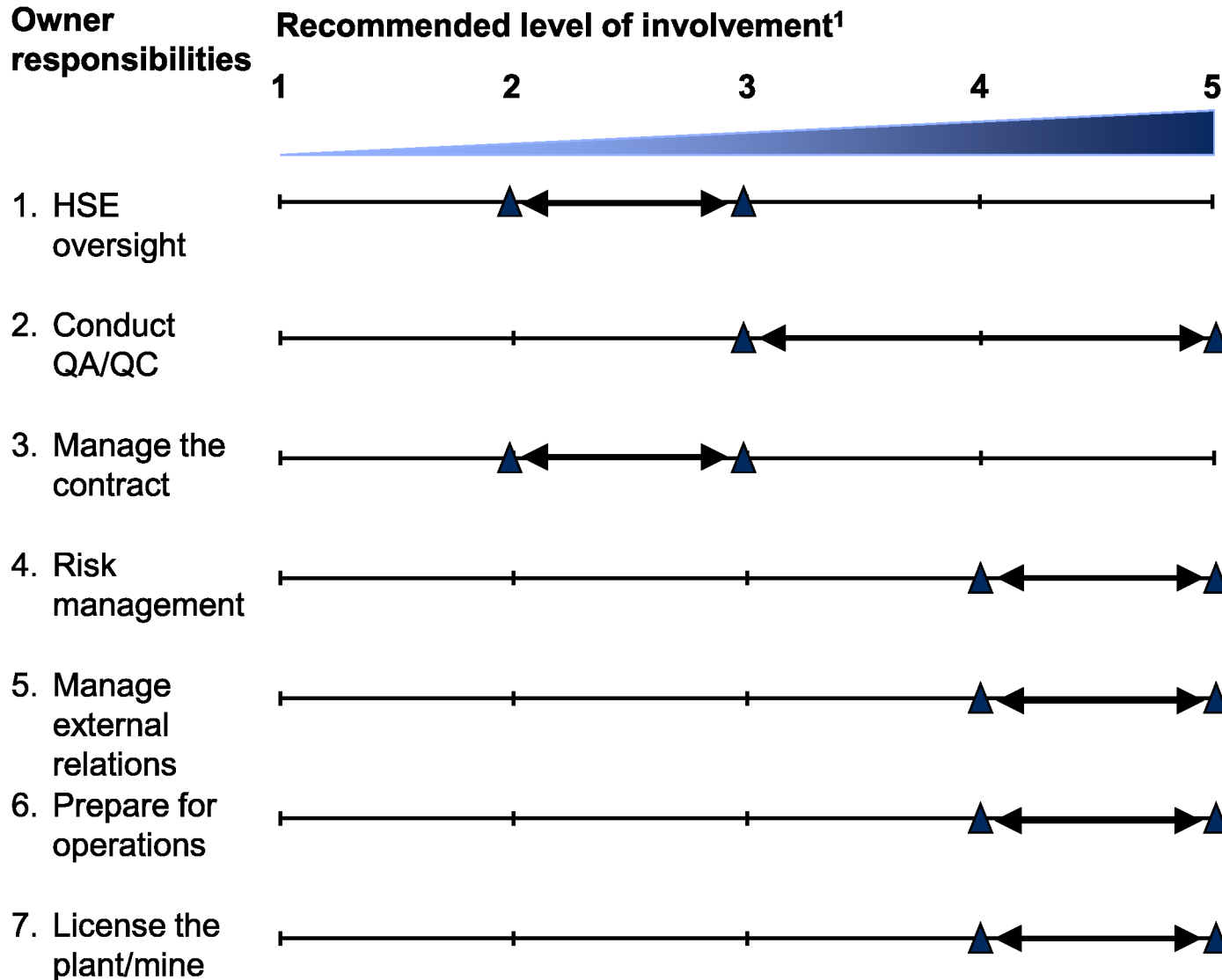
- Be the primary interface with regulatory authorities, including drafting and submitting the application, conducting any comprehensive studies necessary, gathering required documentation, accommodating regulatory inspections, and participating in hearings

For each of the 7 core owner competencies, the owner's role will vary in terms of depth of involvement



Type of involvement	Description
1. Review monthly report	<ul style="list-style-type: none"> Tracking and monitoring of project progress and reporting to project stakeholders (e.g., ExCo) Contractor performs all functions using its own resources and work processes
2. Performance management	<ul style="list-style-type: none"> Contractor performs all functions using its own work process and reports project progress to owner Owner provides input and participates in problem-solving on key issues
3. Auditing	<ul style="list-style-type: none"> Owner leads overall function performance, including setting guidelines, directing, reviewing, and approval the work. Contractor performs detailed work using the owner's work process.
4. Coordination and problem-solving	<ul style="list-style-type: none"> Owner maintains majority control over responsibility, but consults contractor on key issues and information
5. Day-to-day execution	<ul style="list-style-type: none"> Owner maintains full control over responsibility, carrying out day-to-day activities with no EPCM involvement

Best practice in an EPCM contract sees a fairly involved role for the owner across the 7 core responsibilities

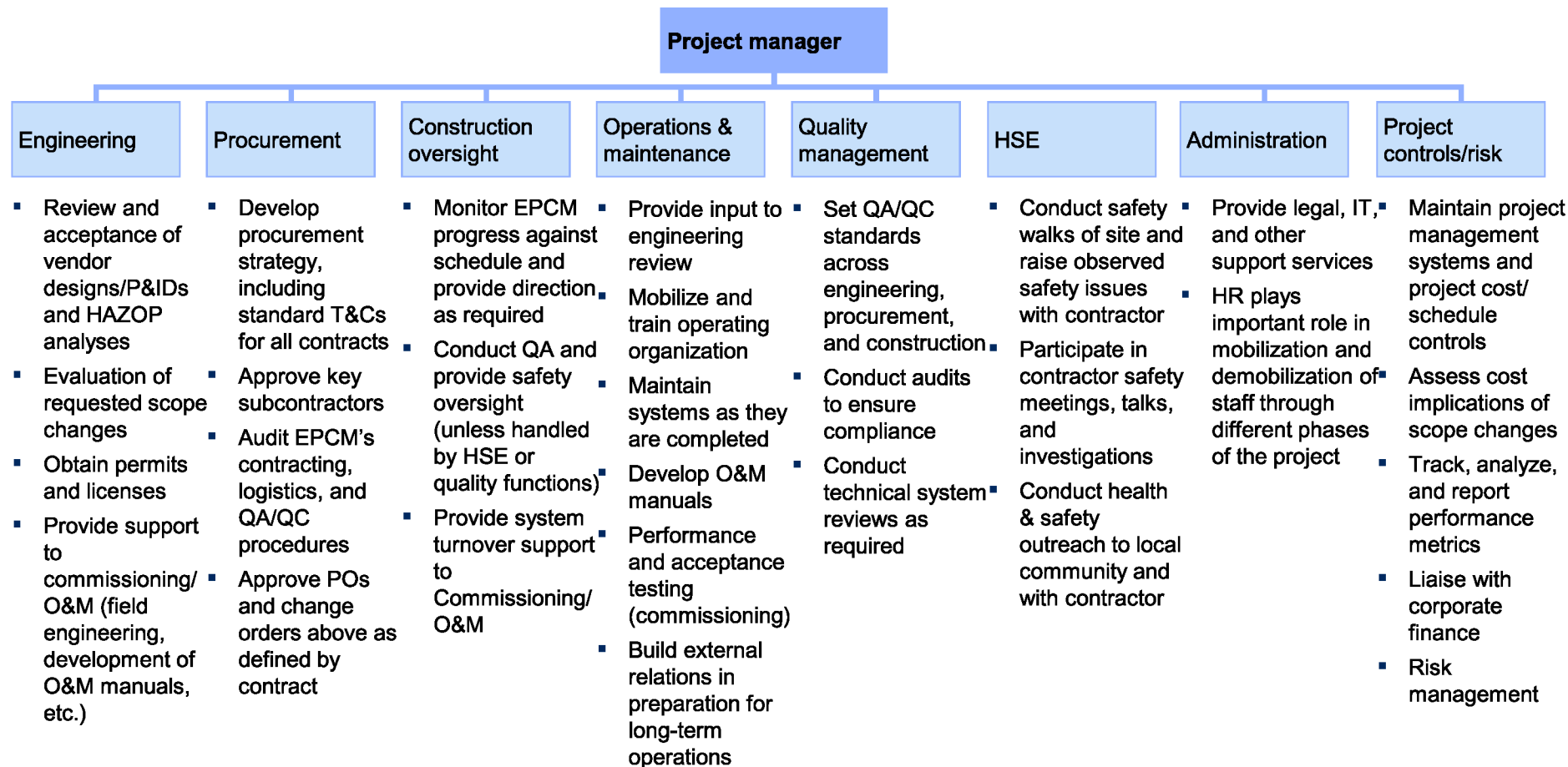


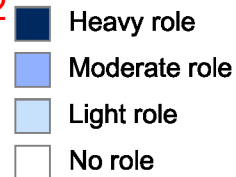
In all cases, the owner must carefully manage its role to ensure that it is not performing tasks for which the EPCM contractor is responsible. Doing so compromises the accountability of the contractor.

¹ Levels of involvement provided as a range as circumstances will vary across projects, owners, and contractors

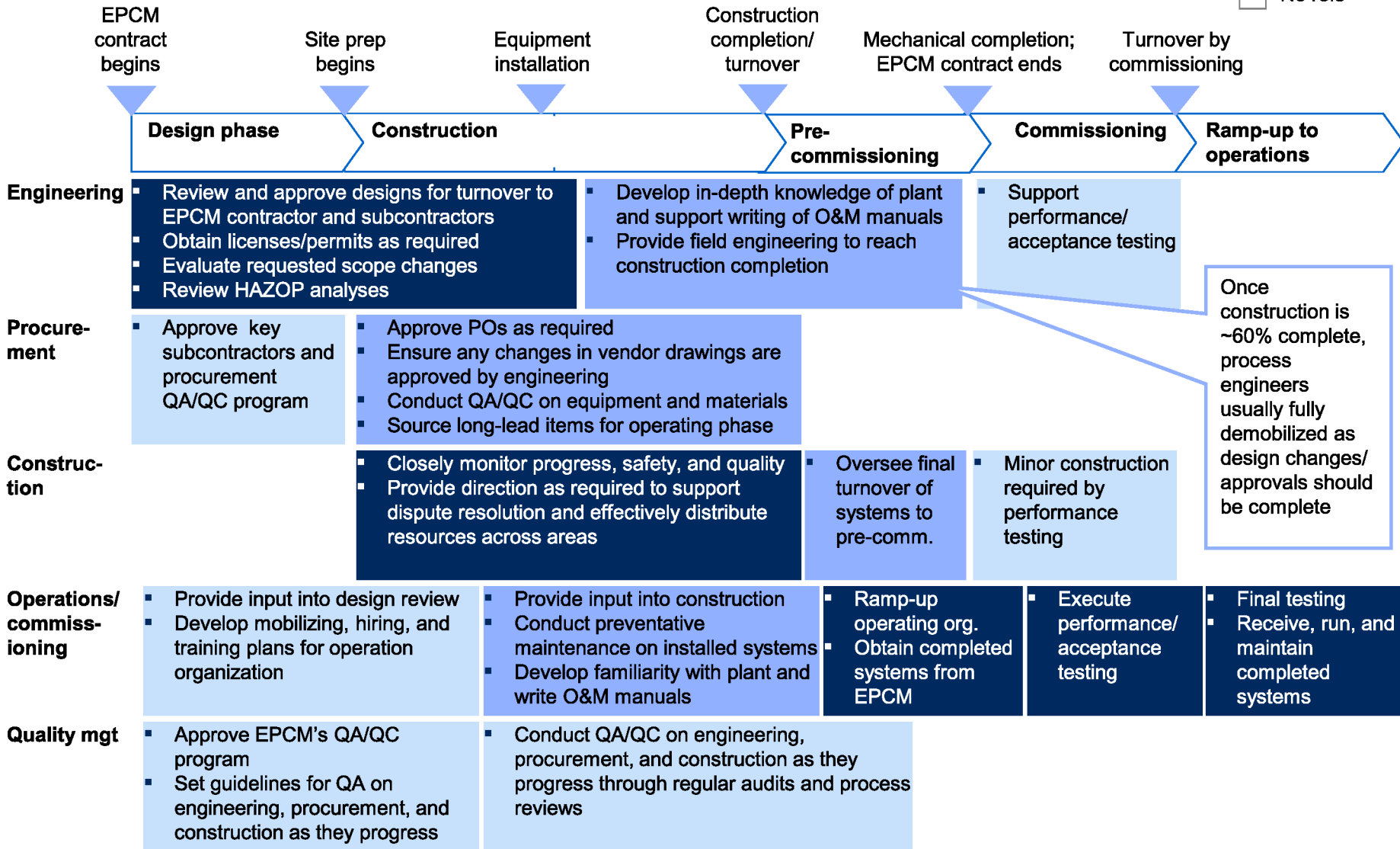
Roles and responsibilities of owner functions focus on providing oversight of contractor and preparing for operations

SIMPLIFIED STRUCTURE OF OWNER'S ORGANIZATION FOR MEGA-CAPITAL PROJECTS





The roles of various functions will vary over different phases in the capital project construction



Contents

- Key owner roles and responsibilities

- **Coordination Procedure / Management Plans**

Represents the key interface documents between owner and EPCM consultant

Provides the “script” by which the owner will play

- Next steps

Best practice for owner / EPCM consultant coordination involves 3 well executed elements in order of precedence

CIMFP Exhibit P-01154

Page 14

1

Governance (process)

The rules for play are thought out, in place and are available to provide policy and guidance to meet Nalcor's business goal(s)

2

People

The positions and skill sets are identified, in place and trained in time to carry out the rules for play effectively

3

Systems (tools)

Sufficient information is available for the owner and consultant to make effective decisions in a timely manner such that each can meet their business goal(s) competitively

- **Governance**

Four Hypothesis have emerged with regards to the readiness of governance that need to be addressed prior to signing an EPCM contract and finalizing People and Systems elements

- **People**

Adherence to governance plans will occur only when a project culture emerges which supports adherence. An owners team that develops its governance plan will be most likely to adopt and live by the plan

- **Systems**

New systems and tools should be adopted sparingly with a focus on the end state rather than current project.

1 Integration between functional areas is not sufficiently seamless to permit the owners team to manage its component without frequent intervention

CIMFP Exhibit P-01154

Page 16

Element	Coordination Proc	Management Plan	Impact
References	Functional areas do not reference companion docs in Management Plan	Identifies coordination work scope for the EPCM	Potential contract change request, budget, late start
Authority	Approval authorities differ between Procedure and Mgmt Plan	See Coordination Proc	Constancy in authority, delay as conflicts are found, potential gaming
Work Process	Difference in work flow diagrams between Coordination Proc and Management Plan	See Coordination Proc	Potential for ad-hoc processes to develop, loss in governing confidence, "holds"
Home Office	N.A.	Identification of interfaces and accountabilities with home office	Bid committee delays, funding delays, changes at execution stage

2 Divergent management philosophies appear between different functional areas

CIMFP Exhibit P-01154

Page 17

Element	Coordination Proc	Management Plan	Impact
Control	Detail EPCM data generation obligation	· Work flow process reflects higher level of owner control	Large owners I.M. team, abrogation of EPCM responsibilities
Authority	Definition of authority differs (ie: Approve vs. Endorse)	Generally follows a LACTI	Gaming, quality of product, loss of owner control
Scope	Deliverables list not fully compliant with body of text	Deliverables not fully compliant with Coordination Procedure	Low value added deliverables, missing critical information, cost / schedule hit

3 Functional work activities “dead end”

CIMFP Exhibit P-01154

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Element	Coordination Proc	Management Plan	Impact
Reports	Reports are required without action attached (approve, inform)	· See Coordination Proc	Work activity traps, staff cost and size growth
Authority	Activities generated have no recipient in owners or EPCM team	Evidence in a LACTI but prime contact is not clear	Work activity traps, staff cost and size growth
Work Process	N.A.	Handoffs between functions in owners team not fully identified.	Potential for ad-hoc processes to develop, loss in governing confidence, “holds”

4 A number of Management Plan functional documents are not yet ready for use

CIMFP Exhibit P-01154

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Element	Coordination Proc	Management Plan	Impact
Content	Processes reflect Owner responsibility not EPCM's	· Purchasing appendix, forms	Ad hoc process to fill in, governance with home office, approval delays
References	No references made	References not produced	Ad hoc process to fill in, governance with home office, approval delays
Forms	No forms referenced	Forms and templates not available	Potential for ad-hoc processes to develop, loss in governing confidence, "holds"

Contents

CIMFP Exhibit P-01154

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- Key owner roles and responsibilities
- Coordination Procedure / Management Plans
- **Next steps**

Next steps – expanded from 20 Oct readiness meeting

CIMFP Exhibit P-01154

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1. **Self assessment of PDS functions – Joint**
 1. Focus on Coordination Procedure and Management Plans – (done)
 2. Agree to and prioritize on EPCM “first need” Management Plans – (done)
 3. Re-affirm owners EPCM management philosophy – (joint event)
2. **Analyze findings – Westney**
 1. Review Coordination Procedure against management philosophy
 2. Review “first priority” Management Plans against Coordination Procedure
 3. Analyze against hypothesis, best practices and document issues for decision
 4. Develop recommendations
3. **Confirm current level of documentation – Westney**
 1. Process – Review linkages to “second priority” elements of management plan
 2. Governance – Review linkages to “second priority” elements of management plan
4. **Develop plan to document integrated PDS - Westney**
 1. Standardize “first need” Management Plan format, interfaces, linkages
 2. Integrate Coordination Procedure with Management Plans and “second priority” links
5. **Review plan with team leads – Joint**
6. **Prepare, review, edit documents - Joint**
7. **Define resource requirements – NE LCP**
8. **Implement – NE LCP**
 1. Resource acquisition
 2. Training
 3. Tool acquisition

1. Self assessment of PDS functions – First Priority Documents

Description	Responsibility	When
Coordination Procedure (approx 300 pages)		
“First Priority” Management Plans		
1. PC-PL-0001-01 – Project Controls		
2. EN-PL-0001-01 – Engineering		
3. PR-PL-0001-01 – Procurement		
4. IM-PL-0001-01 – Information Management		
5. PM-PL-0003-01 – Work Plans and Authorizations		
6. PM-PL-0001-01 – Project Execution Plan		
7. QA-PL-0001-01 – Quality		
8. PM-PI-0005-01 – Project Governance Plan		

1. Self assessment of PDS function – second priority documents

Description	Responsibility	When
“Second Priority” Management Plans		
1. HS-PL-0002-01 – Security		
2. LR-PL-0001-01 – Industrial Relations		
3. CS-PL-0001-01 – Construction Management		
4. OP-PL-0001-01 – Completions and Commissioning		
5. PM-PL-0004-01 – Handover to Operations / Closure		
6. PM-PL-0001-01 – Environmental Management Strategy		
7. HS-PL-0001-01 – Health and Safety		
8. RI-PL-0001-01 – Risk		
9. FI-PL-0001-01 – Project Finance and Accounting		
10. PM-PL-0002-01 – Change Management		
11. AD-PL-0001-01 – Administrative Management		
12. CA-PL-0001-01 – Contract Administration		
13. CO-PL-0001-01 – Communications and Stakeholder Relations		
14. PM-PL-0003-01 – Work Plans and Authorizations		
15. IB-PL-0001-01 – Benefits and Training		