From: jamesmeaney@nalcorenergy.com

To: Morris, Paul J.

Cc: McGrath, Rob; Stanley, Todd; Rob Hull; Scott Pelley

Subject: Re: IE Contract

**Date:** Thursday, June 27, 2013 9:55:34 AM

Attachments: \_\_pnq \_\_pnq

\_\_pnq Fully-executed IE Contract (MWH).pdf

Independent Engineer RFP SOW (with Highlights).docx

Executed IE Reliance Agreement.pdf

#### Hi Paul

Please find attached the following:

- IE services contract executed by Nalcor and MWH in August 2012
- IE scope of work (SOW) that was included in the RFP last spring. You will see this also became Appendix A to the IE contract.
- IE reliance agreement executed by Nalcor, Canada and MWH in June 2013

Based on some of the discussions we've had of late, I thought some clarification on the IE arrangement might be worthwhile. As background, these points have been raised at different times over the last year or so (including during discussions with Charles and Laurie last spring when questions were raised as to who should be engaging the IE), but I thought it would be helpful to try to summarize in one place.

It was always contemplated that Nalcor would only be hiring the IE on an interim basis and eventually that relationship would transfer to the lenders/guarantor. Furthermore, during that interim period the IE was to always conduct itself in a manner as if it's client were already the lenders/guarantor. You will see this is very clearly spelled out on page 1 of the IE SOW.

As required by Section 4.9 of the FLG Agreement (and consistent with the IE SOW), "The Independent Engineer will represent the Guarantor and the Lenders." It was never the intent that the IE would represent Nalcor or NL.

Through the recently executed IE reliance agreement, this relationship between Canada (who is effectively both the guarantor and lender to the Nalcor SPV's) and MWH has now been formalized.

You will also see I have highlighted different sections of the IE SOW that outline the types of reporting that MWH will provide to Canada, both in Phase 1 (prior to Financial Close) and Phase 2 (Construction Period) of it's engagement. As we have indicated, while the IE will be producing these reports for Canada, Nalcor as project owner (and NL as our sole shareholder) will also be able to receive copies.

I hope you find this summary beneficial. Please feel free to give me a call if you have any questions.

Regards,

Jim



Fully-executed IE Contract (MWH).pdf



Independent Engineer RFP SOW (with Highlights).docx





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Project
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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?

"Morris, Paul J." ---06/26/2013 03:02:14 PM---Jim, Further to our recent discussion about the iE providing reports to NL subsequent to Oct/13, cou

From: "Morris, Paul J." <pmorris@gov.nl.ca>

To: <JamesMeaney@nalcorenergy.com>

Cc: "Stanley, Todd" <toddstanley@gov.nl.ca>, "McGrath, Rob" <robmcgrath@gov.nl.ca>

Date: 06/26/2013 03:02 PM

Subject: IE Contract

Jim,

Further to our recent discussion about the iE providing reports to NL subsequent to Oct/13, could you provide a copy of the IE contract. Has it been executrd yet?

Paul

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# AGREEMENT No. LC-PM-082

**FOR** 

**Independent Engineer and Operating and Maintenance Services** 

**FOR** 

THE LOWER CHURCHILL PROJECT

**BETWEEN** 

**Nalcor Energy** 

**AND** 

MWH Canada, Inc.

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Appendix A	Scope of Work;
Appendix B	Compensation;
Appendix C	Key Personnel;
Appendix D	Newfoundland and Labrador Benefits Reporting;
Appendix E	Contractor Requirements – Health, Safety, and Environment
Appendix F	Contractor Requirements - Quality Management;
Appendix G	Coordination Procedures

**THIS AGREEMENT** made at St. John's in the Province of Newfoundland and Labrador as of the 27th day of August 2012.

# **BETWEEN** NALCOR ENERGY, a body corporate constituted pursuant to the *Energy*

Corporation Act, S.N. 2007, c. E-11.01 solely in its own right and not as agent of the Crown in right of the Province of Newfoundland and Labrador, and having its head office at the City of St. John's, Province of Newfoundland and Labrador (hereinafter referred to as "Company") of the first part,

# **AND MWH Canada, Inc.**, a body incorporated under the laws of the Province of

Alberta and having its head office in the City of Vancouver in the Province of British Columbia, (hereinafter referred to as "Contractor") of the second part.

**WHEREAS** Company requires the performance of those services set forth in Appendix A – Scope of Work, attached hereto, (hereinafter called the "Work"); and

WHEREAS Contractor is engaged in the business of performing such services and is prepared to provide the equipment and personnel required to perform the Work;

**NOW THEREFORE** in consideration of the payments to be made hereunder and the respective covenants, agreements, terms and conditions of the parties hereto, Company and Contractor agree as follows:

### 1.0 AGREEMENT DOCUMENTS

1.1 The below listed appendices attached hereto shall form part of this Agreement:

(a)	Appendix A	Scope of Work;
(b)	<b>Appendix B</b>	Compensation;
(c)	Appendix C	Key Personnel;
(d)	<b>Appendix D</b>	Newfoundland and Labrador Benefits Reporting;
(e)	Appendix E	Contractor Requirements – Health, Safety, and Environment;
(f)	<b>Appendix F</b>	Contractor Requirements – Quality Management;
(g)	Appendix G	Coordination Procedures

- 1.2 In case of a conflict between the main body of this Agreement and the Appendices attached hereto, the order of precedence shall be:
  - (a) Main body of Agreement;
  - (b) Balance of Appendices;

### 2.0 **DEFINITIONS**

- 2.1 "Change" means any of the following:
  - (a) An addition to the Work;
  - (b) An increase or decrease in the quantity of the Work;
  - (c) A deletion of any part of the Work;
  - (d) A revision or modification to any part of the Work already completed;
  - (e) A modification or variation in the character or quality of the Work;
  - (f) A variation to the schedule for the completion of a Milestone;
  - (g) A modification in, variation to or deviation from the requirements set out in Appendix A Scope of Work;

but for greater certainty, a Change shall not include:

- (h) modifications, revisions or deviations to the requirements of this Agreement that are necessary to make the Work satisfy the performance requirements set out in Appendix A – Scope of Work;
- (i) any items that can reasonably be inferred as being included in the Work, including the advancement and development of the design of any element of the Work within the Contactor's responsibility under this Agreement;
- (j) modifications, revisions or deviations to the requirements of Appendix A Scope of Work or any additional services that are requested by Company that are necessary because of delays attributable to Contractor;
- (k) any additional services that are required because of a breach of any Contractor's warranty or representation set out in this Agreement; and
- (I) the supply of any services, materials or equipment required to rectify any defects or deficiencies in the Work.
- 2.2 "Company" includes the following entities and persons individually and collectively:
  - (a) Company as previously designated herein;
  - (b) Company's other contractors; and
  - (c) the directors, officers, employees, servants, invitees and agents of all of those entities.
- 2.3 "Confidential Information" means all oral, written, electronic, magnetic or optical data and machine-readable information and data which Contractor receives, either directly or indirectly, from Company with the exception of information that:
  - (a) was in Contractor's possession prior to the invitation to commencement of the Work and were not previously supplied to Contractor in confidence;

- (b) become published through some agency other than Contractor or become generally available to the public or are in the public domain;
- (c) are the same as technical information and data hereafter lawfully acquired by Contractor from third parties not connected with the Work or with the performance of the Work; or
- (d) were independently developed by receiving party without the use of the confidential information.
- 2.4 "Conflict of Interest" (hereinafter referred to as "Conflict") means a situation where a person is involved in multiple interests, one of which could possibly corrupt the motivation for an act in the other.
- 2.5 "Consequential Loss" means consequential or indirect losses and includes but is not limited to, loss or anticipated loss of profit, loss or anticipated loss of revenue, loss or anticipated loss of business opportunity or business interruption.
- 2.6 "Contractor" includes Contractor as previously designated herein and all of its employees, directors, agents, servants and subcontractors involved in the execution of the Work.
- 2.7 "Defects" has the meaning given in Article 22.2;
- 2.8 "Effective Date" has the meaning given in Article 7.1;
- 2.9 "Intellectual Property" means all data, designs, plans, drawings, specifications, research, reports, notes, estimates, summaries, calculations, surveys, papers, completed work, and work in progress and such other information and materials or parts thereof as are compiled, drawn and produced by Contractor in performing this Work, including computer printouts and computer models and all copyrights thereto and all patents, trademarks and industrial designs arising there from.
- 2.10 "Personnel", in relation to any person or entity, means the directors, officers, employees, non-employed representatives and agents of such person or entity;
- 2.11 "Standard of Prudent Contractor" means good faith performance of contractual obligations and exercising that degree of care, skill, diligence, prudence, workmanship and foresight expected from a skilled and experienced contractor engaged in the same type of undertaking, in similar circumstances or conditions and in compliance with all applicable laws and to the satisfaction of authorities;
- 2.12 "Third Parties" means all persons and entities, which are included in neither Company nor Contractor.

- 2.13 "Warranty Period" has the meaning given in Article 22.1; and
- 2.14 "Warranty Work" has the meaning given in Article 22.4.

### 3.0 INTERPRETATION

- 3.1 The doctrine of contra proferentem shall not apply in the interpretation of this document(s) meaning that if there is any ambiguous language in this document it shall not be interpreted more strongly against the party who prepared or drafted the ambiguous language.
- 3.2 The words "include", "includes" and "including" as used in this Agreement are not to be construed as words of limitation but shall in all cases be without limitation and interpreted to mean without limitation.
- 3.3 Article headings are inserted herein for convenience of reference only and shall not form a part hereof for purposes of interpretation.
- 3.4 Wherever, in this Agreement, a number of days are prescribed for any purpose, unless otherwise specified, the days shall be calendar days and shall be reckoned exclusively of the first and inclusively of the last.
- 3.5 The rights and recourse of Company and Contractor contained in this Agreement are cumulative and not in the alternative unless otherwise provided. The exercise of any such rights or recourse shall not constitute a waiver or renunciation of any other rights or recourse.
- 3.6 Any review, approval, comment, acceptance, or other affirmation of Contractor's Work or any component thereof by Company shall not waive Contractor's obligations under applicable laws or as outlined in this Agreement.
- 3.7 The illegality or unenforceability of any provision of this Agreement shall in no way affect the legality or enforceability of any other provision hereof. Any illegal or unenforceable provision shall be deemed severed from this Agreement and the remainder of this Agreement shall be construed and enforced as if this Agreement did not contain such illegal or unenforceable provision.
- 3.8 Company is entering into this Agreement, and Contractor acknowledges that Company is entering into this Agreement, solely in its own right and not on behalf of or as agent of the Crown in right of the Province of Newfoundland and Labrador;

### 4.0 SCOPE OF WORK

- 4.1 Contractor represents and warrants that it has the required skills and capacity to perform the Work as set forth in this Agreement, and covenants that it will perform the Work to the Standard of Prudent Contractor.
- 4.2 Contractor shall report to and carry out the directives of Company representative, or such other person as shall be designated by Company in writing.
- 4.3 Company shall have the right at any time to order Changes in the Work or additional Work. All additional Work or Changes to the Work shall be governed by the provisions of this Agreement subject an approved Change order to, or amendment of this Agreement upon mutual agreement of the parties. No additional Work or Changes in the Work shall be implemented by Contractor unless such additional Work or Changes in the Work, and the associated costs, have been approved by Company in writing.
- 4.4 In no event shall Contractor utilize an agent or a subcontractor to perform the Work without the prior written consent of Company. Contractor shall ensure that all subcontracts are consistent with the provisions of this Agreement and, in particular, with the rights of Company and the obligations of Contractor under this Agreement. Contractor shall be able to demonstrate that Company has received best value on subcontracted services, or materials used in the execution of the Work.
- 4.5 Contractor represents and warrants that it shall complete the Work or additional Work in conformity with the provisions of this Agreement.
- 4.6 Contractor shall ensure fitness for purpose, maintain and keep in good operating condition the equipment used in the execution of the Work, together with all spare parts, replacement parts and consumables required for normal maintenance and operation, it being understood that proper maintenance of the equipment is essential to the Work.

### 5.0 PERSONNEL

- 5.1 Contractor shall assign the personnel listed in Appendix C to the Work. Contractor shall not replace such personnel without the prior written consent of Company, which consent shall not be unreasonably withheld.
- 5.2 Contractor shall employ only competent and skillful employees of such qualifications, experience and ability as are necessary to enable Contractor to fully and capably perform the Work. In no event shall Contractor utilize an agent or a subcontractor to

perform the Work without the prior written consent of Company. Where such personnel are Contractor's agents or subcontractors, Contractor warrants to Company that the Work performed by them shall be in accordance with the Agreement requirements and Contractor shall be responsible for all aspects of the Work including the quality of the Work performed by such agents and subcontractors.

- 5.3 Notwithstanding that the personnel employed hereunder are Contractor's personnel, Company may require Contractor to remove from the Work any of Contractor personnel who, in the opinion of Company is considered to be undesirable or lacks the required education, experience, skill, aptitude, or ability to safely perform the Work under this Agreement. Such person shall not again be utilized by Contractor to do Work hereunder without permission of Company. Any personnel so removed shall be replaced as soon as possible by a competent substitute. All expenses incurred in compliance with any such request shall be borne by Contractor.
- 5.4 Contractor shall, as soon as is practical, replace any of its personnel who resigns, is discharged, or who is removed at Company's request.

## 6.0 DELAY

Where either party is aware of an event or any circumstances which are delaying or are expected to delay the performance of the Work, that party shall give written notice, within seven (7) days, to the other party of the particulars of the cause and the expected length of the delay and the steps that the party intends to take to mitigate the effects of the delay.

# 7.0 EFFECTIVE DATE

7.1 Notwithstanding the date of execution of this Agreement, this Agreement shall commence on the 27th day of August, 2012 (hereinafter called the "Effective Date").

# 8.0 SUSPENSION OR TERMINATION

- 8.1 Company shall have the right to terminate this Agreement at any time by giving Contractor seven (7) days' written notice prior to the date of termination of this Agreement.
- 8.2 This Agreement may be terminated at any time by Company immediately upon giving notice to Contractor if, in the opinion of Company, Contractor fails to perform its obligations in accordance with the terms and conditions of this Agreement.

- 8.3 The termination shall not affect the rights of parties hereto which have accrued prior to the date of termination and shall not relieve any party from its obligations, which may have arisen during the term of this Agreement.
- 8.4 Within fourteen (14) days of notice of termination, Contractor shall submit to Company a schedule of costs and expenses incurred plus any additional costs and expenses that Contractor expects to incur after the date of termination and for which Contractor will require reimbursement.
- 8.5 Company may suspend the performance of the Work hereunder, in whole or in part, at any time and from time to time for a period not exceeding six (6) calendar months on each occasion. During the period of suspension, Contractor shall remain prepared to reactivate its Work and shall resume the performance of its Work as directed by Company. Upon resumption of the Work, Contractor shall make every reasonable attempt to reassemble the original team, it being understood that in the event of a prolonged suspension some personnel may not be immediately available.

In the event of suspension of the performance of the Work at the request of Company the payment of costs incurred to that date, calculated in accordance with agreed Agreement rates, shall be deemed to be reasonable compensation to Contractor for the Work rendered prior to that date.

If during any period of suspension requested by Company, Contractor reasonably incurs expenses under this Agreement which have been mutually agreed to in writing by Company and Contractor and provision for compensating Contractor in respect of such expenses is not made elsewhere in this Agreement, Company shall pay Contractor for same an amount to be determined on a fair and equitable basis.

8.6 Company shall not be liable for any losses or damages of any kind suffered by Contractor on account of the termination or suspension.

# 9.0 FORCE MAJEURE

- 9.1 Neither party shall be considered in default in the performance of any of its obligations hereunder to the extent that performance of any such obligations is delayed, hindered, or prevented by force majeure.
- 9.2 Force majeure shall be any cause beyond the control of the party pleading it which such party could not reasonably have foreseen and guarded against.

9.3 Force majeure includes acts of God, floods, earthquakes, strikes, fires, riots, incendiarism, interference by civil or military authorities, compliance with the regulations or order of any government authority, acts of war (declared or undeclared) and civil disobedience, provided that such cause could not reasonably have been foreseen and guarded against by it.

### 10.0 REMUNERATION

- 10.1 Unless otherwise stated herein, Contractor shall be paid in Canadian funds for performing the Work in accordance with the terms and conditions specified in Appendix B and shall be subject to the holdback provisions and setoff provisions of Article 11.
- 10.2 No overtime shall be paid for by Company unless so authorized in writing by Company.
- 10.3 Contractor shall submit invoices, in a format acceptable to Company, accompanied by relevant supporting documentation (approved timesheets, supplier invoices, receipts or other such proof of expenditure) to Company at the beginning of each month for the work performed during the previous month or in accordance with agreed payment milestones. Invoices shall clearly identify Company assigned Agreement number, shall be broken down in accordance with the rates and items specified in Appendix B and where applicable, shall be broken down by Work Task Order (WTO), by Company provided cost control account, by cost category or other criteria assigned by Company.
- 10.4 Contractor shall present its invoices to Company's office at:

Nalcor Energy – Lower Churchill Project P. O. Box 12800 500 Columbus Drive St. John's, NL, A1B 0C9

Attention: Accounts Payable

- 10.5 Contractor's invoice shall identify separately the total amount of Goods and Services Tax or Harmonized Sales Tax ("GST/HST") applicable to the invoice value, and shall indicate on the invoice Contractor's GST/HST Registration Number. Company will be under no obligation to pay GST/HST on invoices unless Contractor provides its GST/HST Registration Number on the invoice. In the event Contractor does not invoice Company for GST/HST, Contractor shall indicate on the invoice the basis upon which Contractor is exempt from the obligation to collect GST/HST.
- 10.6 Any dispute concerning the amount of any payment(s) including, without limitation, any dispute as to Company's right under this Agreement or otherwise to offset any claim it

may have, shall not relieve Contractor of its obligation to proceed with all due diligence to complete all the Work to be performed under this Agreement in accordance with the agreed schedule and Contractor hereby irrevocably grants to Company, its employees, agents and representatives such rights of access to all premises or facilities occupied by Contractor or any of its Affiliates or Subcontractors as may be required by Company to take possession of the Work. Company shall be entitled to take possession of the Work against payment of the undisputed amount(s).

- 10.7 Within thirty (30) calendar days after receipt of such invoice, Company shall, after any appropriate adjustments and subject always to possible further verification and correction, pay Contractor for such monthly invoices.
- 10.8 The acceptance by Contractor of the final payment under this Agreement shall operate as, and shall be, a release to Company and its agents from any and all claims of and liability to Contractor for anything done or furnished for, or in relation to, the Work or this Agreement, or for any act of neglect or omission of Company and its agents relating to or affecting this Agreement or the Work.
- 10.9 Delay by Company in making a payment when it becomes due and payable shall not be deemed to be a breach of this Agreement by Company.
- 10.10 When converting from a foreign currency into Canadian, or vice-versa, for the purposes of invoicing, the Bank of Canada exchange rate on the invoice date shall apply. A printout from the Bank of Canada website, which demonstrates the rate, shall be included with the invoice.

# 11.0 WITHHOLDING, SETOFFS AND DEDUCTIONS

- 11.1 Company shall be entitled to withhold payment or to deduct from Contractor's compensation to the extent necessary to protect Company in respect of:
  - (a) invoiced amounts reasonably disputed by Company;
  - (b) failure of Contractor to make payments promptly to subcontractors, governing agencies, agents, or suppliers;
  - (c) defective Work not remedied;
  - (d) liens or claims filed, or reasonable evidence indicating to Company the probability of claims or liens being filed, with respect to the Work;
  - (e) as permitted or required by law or as expressly provided in Article 10, Article 11, Appendix B, or elsewhere in this Agreement; and
  - (f) incomplete Work.

- 11.2 Contractor shall pay all debts and commitments related to the Work or additions, amendments or Changes thereto as and when they become due and payable.
- 11.3 Any indebtedness of Contractor to Company, or to a parent, subsidiary or affiliate of Company may, in the sole discretion of Company, be setoff by Company against any indebtedness of Company to Contractor hereunder.
- 11.4 Company may deduct from Contractor's compensation, the amount, if any, of Contractor's required contributions to the Workplace Health Safety and Compensation Commission (WHSCC), Canada Pension Plan and Employment Insurance Commission, where Company, in its sole discretion, determines that such amounts may be assessed against Company, and Company shall remit such amounts to the appropriate authorities on Contractor's behalf.
- 11.5 If Company is required by the Canada Revenue Agency, or if Company, in its sole discretion, determines that it is required by Canada Revenue Agency to withhold from any monies due to Contractor hereunder, any amount required under Canadian income tax legislation, then Company shall withhold such amount. Company shall not be liable for any costs or interest to Contractor as a result of withholding as specified herein.

# 12.0 RECORDS AND ACCOUNTS OF COSTS

- 12.1 Contractor shall keep and maintain complete and accurate records related to the Work including; time, costs incurred, schedule, progress, productivity, quantities, quality, health, safety and environment and maintain books and accounts in accordance with generally accepted accounting procedures, principles and practices respecting all matters pertinent to this Agreement.
- 12.2 Company shall have the right to access and audit the records related to the Work with two (2) days written notice for a period of six (6) years after the termination of this Agreement.
- 12.3 Any claims or discrepancies disclosed by such review shall be made in writing to Contractor, and Company and Contractor shall exercise good faith to resolve all review exceptions within a reasonable period of time after completion of such review and promptly settle accounts in accordance therewith.

# 13.0 INDEPENDENT CONTRACTOR

13.1 In the performance of the Work, Contractor shall operate as an independent contractor.

Nothing in this Agreement will be construed to constitute Contractor as an agent,

- servant, employee or subcontractor of Company.
- 13.2 Contractor shall indemnify and hold Company harmless from all costs and expenses arising out of any claim or liability by reason that Contractor is considered an agent, servant, employee or subcontractor of Company.

#### 14.0 **CONFLICT OF INTEREST**

- 14.1 The Contractor confirms that it is not currently subject to any mandate, which would be in Conflict with Company interest. On an ongoing basis, Contractor shall ensure that it will not accept a mandate which would put it in Conflict with Company interests. In the event that any Conflict of Interest should be identified, it will be immediately communicated to Company and a mutually satisfactory resolution determined.
- 14.2 Notwithstanding Article 8, if Company determines Contractor is operating in a fashion that is in a Conflict with Company, Company may at its sole discretion immediately terminate this Agreement.

#### 15.0 **CONFIDENTIALITY AND PRIVACY**

- 15.1 Contractor shall use the Confidential Information for the Work only and shall hold the Confidential Information in confidence at all times and not use or disclose it to anyone without Company's prior written approval, which approval may be withheld at Company's sole discretion.
- 15.2 Contractor may disclose the Confidential Information to those of its employees, agents, servants or subcontractors to whom disclosure is required by Contractor for the Work, and shall ensure each such employee, agent, servant or subcontractor are informed of the confidential nature of the Confidential Information and that all such employees, agents, servants and subcontractors at all times comply with the obligations under this Article 15.
- 15.3 Unless permitted or requested by Company in writing, Contractor shall not disclose to any third party or use for any other Work, any of the materials prepared or developed by Contractor in the performance of the Work, including documents, calculations, maps, sketches, notes, reports, data, models and samples which shall become property of Company in accordance with Article 21.0.
- 15.4 It is not Company's desire to be afforded access to Contractor's or any of Contractor's agent's or subcontractor's or any other third party's, confidential information.

Therefore, Contractor shall ensure that any information, which Contractor supplies or arranges to have supplied to Company shall not be subject to any obligation of confidentiality. Company shall not be liable for any use or disclosure of such information, and Contractor shall hold Company harmless against any liability arising from such use or disclosure.

- 15.5 Contractor shall use all personal information collected, received, handled or processed by it under this Agreement on behalf of Company (hereinafter referred to as "Personal Information") only for the Work, and shall not, for any reason, use the Personal Information for other, or its own works. In accordance with Article 12.0, Company shall have the right to audit or review Contractor's processes and procedures to ensure that the Personal Information is not being collected, used or disclosed in an unauthorized manner, and that the provisions of this Agreement are being fully complied with.
- 15.6 If a party is required to disclose Confidential Information in order to comply with a law, statute, regulation, standard, code, order, directive or other rule from any governmental or regulatory body or other duly constituted public authority having jurisdiction over the party or the Work or legally binding order of any court it shall first give notice of such requirement to disclose the Confidential Information with full particulars of the proposed disclosure.
- 15.7 All publicity releases or advertising dealing with the Work shall be submitted for approval of Company prior to release to the news media.
- 15.8 Company is subject to the Access to Information and Protection of Privacy Act, Statutes of Newfoundland and Labrador, 2002 Chapter A-1.1 (hereinafter referred to as the "ATIPP Act"), and consequently the public has a right of access to Company's records.
- 15.9 If requested by Company, whether prior to or after the expiry or earlier termination of this Agreement, Contractor shall promptly deliver to Company all Confidential Information in custody possession or control of Contractor and destroy any electronic copies and backups of Confidential Information.
- 15.10 Although section 27 of the ATIPP Act an section 5.4 of the ECNL Act provide exceptions, which may sometimes be enforceable when access to information relating to a third party is requested, there may be instances when Company is required to provide a member of the public with access to such information.
- 15.11 Company shall not be liable for any claims, costs, losses or damages experienced by Contractor as a result of Company release of information to another party pursuant to the provisions of the ATIPP Act or due to any other legal requirements.

15.12 Notwithstanding anything else stated herein and with respect to the Confidential Information Contractor agrees that Company will be irreparably damaged if any provision of Article 15.0 is not performed by the Contractor in accordance with its terms and that monetary damages may not be sufficient to remedy any breach by the Contractor of any term or provision of this Agreement and the Contractor further agrees that the Company shall be entitled to equitable relief, including injunctive and specific performance, in the event of any breach hereof and in addition to any other remedy available at law or in equity.

#### 16.0 **COMPLIANCE WITH LAWS AND PERMITS**

- Contractor shall be required to comply with, observe, perform and fulfill the obligations 16.1 and requirements of all federal, provincial and municipal statutes, by-laws, ordinances, regulations and orders in force and effect and shall ensure that its subcontractors, employees and agents likewise comply with, observe, perform and fulfill the obligations and requirements of all federal, provincial and municipal statutes, by-laws, ordinances, regulations and orders in force and effect during the term of this Agreement.
- 16.2 Company and governmental entities, or their authorized representatives or agents, shall have the right to examine during normal business hours all documents, records, correspondence, receipts and memoranda of Contractor to ensure compliance with all applicable laws and relevant health and safety and environmental rules, regulations and practices. Such documentation shall be preserved and made available for audit, without charge, during the term of this Agreement and for a period of six (6) years after termination of this Agreement.
- 16.3 Contractor shall be responsible for obtaining from the proper authority all permits, approvals, licenses and authorizations required for the Work, unless specifically addressed in the Appendices as the responsibility of Company.

#### 17.0 **GOVERNING LAW AND FORUM**

17.1 The Agreement shall be governed by and construed in accordance with the laws of the Province of Newfoundland and Labrador and every action or other proceeding arising hereunder shall be determined exclusively by a court of competent jurisdiction in the Province of Newfoundland and Labrador, subject to the right of appeal up to the Supreme Court of Canada where such appeal lies.

#### 18.0 LIABILITY AND INDEMNITY

- 18.1 Notwithstanding any other provision of this Agreement, Contractor shall waive all rights of legal recourse in respect of and, in addition, indemnify and keep indemnified and hold harmless Company from and against, any claim arising from or in connection with this Agreement in respect of loss of or damage to the property of Contractor, howsoever caused and regardless of whether or not and to what extent such claim is caused or contributed by breach of agreement, negligence, breach of duty or other default on the part of Company except to the extent that such claim is caused or contributed to by the gross negligence or willful acts or omissions on the part of Company.
- 18.2 Notwithstanding any other provision of this Agreement, Company shall waive all rights of legal recourse in respect of and, in addition, indemnify and keep indemnified and hold harmless Contractor from and against, any claim arising from or in connection with this Agreement in respect of loss of or damage to the property of Company, howsoever caused and regardless of whether or not and to what extent such claim is caused or contributed to by breach of agreement, negligence, breach of duty or other default on the part Contractor except to the extent that such claim is caused or contributed to by the gross negligence or willful acts or omissions on the part of Contractor.
- 18.3 Notwithstanding any other provision of this Agreement, Contractor shall waive all rights of legal recourse in respect of and, in addition, indemnify, keep indemnified and hold harmless Company from and against, any claim arising from or in connection with this Agreement in respect of personal injury (including disease or illness) or death sustained or alleged to be sustained by the Personnel of Contractor, howsoever caused and regardless of whether or not and to what extent such claim is caused or contributed to by breach of agreement, negligence, breach of duty or other default on the part Company.
- 18.4 Notwithstanding any other provision of this Agreement, Company shall waive all rights of legal recourse in respect of and, in addition, indemnify, keep indemnified and hold harmless Contractor from and against, any claim arising from or in connection with this Agreement in respect of personal injury (including disease or illness) or death sustained or alleged to be sustained by the Personnel of Company, howsoever caused and regardless of whether or not and to what extent such claim is caused or contributed to by breach of agreement, negligence, breach of duty or other default on the part of Contractor.
- 18.5 Contractor shall, to the extent of its negligence, be liable for and, in addition, indemnify, keep indemnified and hold harmless Company from and against all Claims, arising from or in connection with this Agreement, including Claims brought by Third Parties for Consequential Loss, in respect of:

- (a) death of or personal injury sustained by a Third Party; or
- (b) loss of or damage to the property of any Third Party;
- 18.6 Except as provided in Article 18.5 neither Company nor Contractor shall bear any liability to the other for Consequential Loss.
- 18.7 Contractor shall be liable for and indemnify and save harmless Company for any amounts assessed against and paid by Company to the Workplace Health Safety and Compensation Commission (WHSCC), Employment Insurance (EI) or such similar government agency, where the assessment is a result of Contractor's failure to pay required contributions to the government agency.
- 18.8 Notwithstanding anything else herein contained, Contractor shall indemnify Company against all costs, charges and expenses which may be incurred by Company in connection with any default by Contractor in paying to the Canada Revenue Agency any tax due arising from payments made by Company to Contractor.
- 18.9 Contractor shall indemnify and save Company harmless from any claims or liability for income tax, excess profits tax and any other taxes of a similar nature assessed or levied by the government of any country, state, province, or other authority against Company on account of the compensation paid by Company to Contractor hereunder.
- 18.10 Contractor shall indemnify and save Company harmless against all taxes assessed or levied against Company on account of wages, salaries or other benefits to Contractor's employees, agents and subcontractors and all taxes assessed or levied against Company on account of any property or equipment of Contractor.
- 18.11 Contractor shall defend, indemnify and save Company harmless from claims arising out of any copyright, patent or trade secret infringement or claims thereof for any copyright or patent application made prior to the date of this Agreement, pertaining to the Work performed under this Agreement. Nothing herein shall authorize Contractor to settle any such suit or action without the prior written authorization of Company, if, by such settlement, Company is obliged to make any monetary payment, to part with any property or any interest therein, to assume any obligation, to be subject to any injunction, or to grant any licences or other rights under its copyright, patent or trade secret rights.
- 18.12 Contractor shall require that any of its employees, servants, agents or subcontractors who perform any portion of the Work assume obligations identical in principle with those contained in this Article.

18.13 Notwithstanding any other provision of the Agreement, and except with respect to Third Party claims, the maximum aggregate liability of Contractor to Company under the Agreement shall not exceed the value of compensation for services.

## 19.0 INSURANCE

- 19.1 Contractor shall carry professional errors and omissions liability insurance in the amount of one million (\$1,000,000) dollars and shall ensure that each sub-contractor who has a professional liability exposure and who is engaged by Contractor in the performance of the Work is covered against professional errors and omissions in the amount of one million (\$1,000,000) dollars. Such insurance shall be in effect for at least twelve (12) months following final acceptance or completion of the Work, whichever is longer.
- 19.2 Contractor shall maintain at its expense Commercial General Liability Insurance for the amount of one million (\$1,000,000.00) dollars for any one accident or occurrence. Where applicable, Contractor's insurance will include the following riders; Environmental Impairment / Pollution, Blasting, Collapse/Underpinning, Watercraft, Marine Protection Indemnity from a reputable club (for vessels > 26').
- 19.3 Contractor shall maintain at its expense Automobile Liability Insurance which shall cover all licensed vehicles, owned, non-owned, hired or leased, for the amount of one million (\$1,000,000.00) dollars for any one occurrence involving bodily injury and/or property damage.
- 19.4 Contractor shall provide Company with proof of the insurance coverage which it is required to maintain in full force and effect during the performance of the Work.
- 19.5 All insurance policies shall provide that the insurance shall not be cancelled, reduced, restricted, terminated, or materially changed in any way or be allowed to lapse without at least thirty (30) calendar days written notice to Company, except in the event of non-payment when policy conditions dealing with termination will apply. Such notice shall be sent in accordance with Article 30. In the event of any such cancellation, reduction, restriction, termination, change, or lapse in any insurance, Contractor shall immediately replace such insurance.
- 19.6 Prior to commencing the performance of any part of the Work on the site, Contractor shall have in place any other insurance which is required by law and may also have in place any other insurance which Contractor considers necessary or prudent.
- 19.7 Where Contractor fails to comply with the requirements of this Article Company may take all the necessary steps to affect and maintain the required insurance coverage at Contractor's cost.

- 19.8 Where an insurer fails or refuses to pay any claims under an insurance policy covering the activities of Contractor relating to or arising out of the Work or performing the Agreement, Contractor shall not be released from any liability arising under this Agreement.
- 19.9 Contractor's insurance policies required by this Agreement shall be endorsed to waive insurers' rights of subrogation against Company except to the extent of liability assumed by Company. With respect to the liabilities assumed and indemnities provided by Contractor under this Agreement, all liability policies shall name Company as an additional insured; shall contain cross liability and severability of interest provisions; and, shall be primary to any policies maintained by Company.
- 19.10 Contractor's obligation to purchase and maintain insurance under this Agreement will in no way limit or otherwise qualify the liabilities or obligations of Contractor under this Agreement.

# 20.0 WORKERS' COMPENSATION

- 20.1 Contractor shall pay all assessments due under the relevant Workers' Compensation legislation. Prior to commencing the Work, Contractor shall obtain and deliver to Company a certificate or certificates establishing that it is in good standing with the Workplace Health, Safety and Compensation Commission (WHSCC) of Newfoundland and Labrador and with the comparable board or commission of any other province having jurisdiction in connection with Contractor's performance of the Work.
- 20.2 Contractor shall produce, upon the request of Company, a satisfactory certificate(s) clearing all indebtedness under relevant Workers' Compensation legislation prior to the payment of any monies owing to Contractor.

#### 21.0 OWNERSHIP OF WORK

21.1 Title to all drawings, calculations, work sheets, and like documents, including software and intellectual property, prepared or caused to be prepared by Contractor in connection with the Work shall vest in Company and shall be delivered to Company upon completion of the Work or upon earlier termination of this Agreement. Contractor shall have the right to retain a copy of all such documents and to make use of them in the course of its general business, with Company consent. Contractor shall not divulge, release or publish same, or any part thereof without the prior written permission of Company. Nevertheless, Contractor shall have the right to have access to

all such original documents at any time during the life of the Work for purposes connected with the Work. Contractor shall own all pre-existing proprietary rights, including its processes, methodologies, and know-how. Any re-use of Contractor's work product shall be at Company's sole risk.

21.2 Title to the Work (or any part) performed, including all Contractor's documentation related to the Work, shall vest in Company as and when performed or prepared. Title to all equipment and materials to be supplied by Contractor or its Subcontractors for incorporation into the Work shall vest in Company as and when it is delivered to Contractor or upon and to the extent of any payment for the equipment by Company to Contractor, whichever is earlier. Contractor shall identify, segregate in a secure area so far as possible and mark or otherwise identify all equipment for incorporation into the Work as property of Company. Title to any items free issued to Contractor by Company shall always remain vested in Company.

# 22.0 WARRANTY

- The Warranty Period in respect of Work is that period commencing after the Work is put into service by Company and ending sixty (60) months thereafter ("Warranty Period").
- 22.2 For the duration of each Warranty Period, Contractor warrants all of the Work and Warranty Work, against any and all defects, errors and failures in design, materials, engineering and workmanship (collectively the "Defects"). All professional work product shall be governed by the Standard of Prudent Contractor.
- 22.3 For the avoidance of doubt, the provisions of this Article 22 shall also extend to all portions of the Work and Warranty Work carried out by subcontractors. Contractor shall cause to be extended to Company any applicable representations, warranties, guarantees and obligations with respect to design, engineering, materials, workmanship, equipment, tools and supplies furnished by its subcontractors. All representations, warranties, guarantees and obligations of subcontractors shall be:
  - (a) so written as to survive all Company and Contractor inspections, tests and approvals; and
  - (b) extended to and be enforceable by Company, its successors and assigns. If applicable, Contractor shall assign to Company all of Contractor's rights and interest in all extended warranties for periods exceeding the applicable Warranty Period which were received by Contractor from any of its subcontractors or vendors.
- 22.4 If, within the Warranty Period, any of the Work is faulty, defective or deficient, Contractor, on receipt of notice from Company, shall commence and diligently perform all services and work and supply all materials and equipment required to remedy such defect to the Standard of a Prudent Contractor and in the manner and at the times that

- Company directs so that it conforms to the requirements in the Agreement ("Warranty Work").
- 22.5 If Contractor does not fulfill its requirements under this Article 22 or fails to fulfill its requirements within the period set by Company, within five (5) business days of notice to Contractor by Company, Company may have the Work which is the subject of the notice from Company corrected by a third party at the sole cost of Contractor. Such recourse shall in no way relieve Contractor from its Warranty obligations.
- 22.6 Contractor shall not substitute any materials without the approval of Company. All work required to be performed in accordance with the terms of this Article shall be performed at the expense of Contractor and shall not give rise to any right of Contractor to remuneration.

#### 23.0 ASSIGNMENT AND SUCCESSORS

- 23.1 Company may assign this Agreement to third parties without the consent of Contractor.
- 23.2 Contractor shall not assign this Agreement nor subcontract the Work in part or in whole without the prior written consent of Company. Consent to assign or subcontract the work will not relieve Contractor of any of its liabilities or obligations under this Agreement.
- 23.3 Contractor is not permitted to create any contractual relationship between a third party and Company.
- 23.4 The Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of the parties hereto.

#### 24.0 SAFETY AND ENVIRONMENT

- 24.1 Contractor shall maintain the highest possible standards of safety, environmental protection and loss prevention and shall comply with;
  - (a) any safety, environmental and security instructions, orders or guidelines of Company; and
  - (b) all safety and environmental standards, regulations and guidelines of any authority having jurisdiction over the area in which the Work is being performed.
- Contractor shall require of its personnel, agents and subcontractors that they strictly 24.2 obey all safety and environmental orders, government safety and environmental

- regulations and guidelines and instructions in force by Company.
- 24.3 All safety and environmental accidents and incidents shall be reported to Company in a written format acceptable to Company.
- 24.4 Where Contractor will be managing contracts involving site work, Contractor shall provide proof of completion by its field managers and supervisors of the Leadership for Safety Excellence component of the Certificate of Recognition Safety Program of the Newfoundland and Labrador Construction Safety Association (NLCSA). Prior to commencing such site work, Contractor shall obtain and deliver such proof or proof of completion of a similar safety program component to Company.
- 24.5 Where Contractor will be managing contracts involving site work, Contractor shall provide proof of completion, by its supervisors and managers, of the NLCSA environmental awareness program or a similar program acceptable to Company. Proof shall be provided prior to the commencement of Work.

# 25.0 QUALITY

- 25.1 Contractor shall comply with the quality requirements as set forth in the Agreement.
- 25.2 Contractor shall use quality assurance programs in performing the Work which comply with all applicable laws and industry accepted practices.
- 25.3 Notwithstanding any Company, authority or other third party inspection, testing or witnessing, Contractor shall be responsible for quality control, quality surveillance/inspection, testing and quality assurance of the Work to verify and be able to demonstrate substantive compliance with the requirements of this Agreement.
- 25.4 Company shall have the right to perform surveillance and to use other verification tools to verify the performance of Contractor and of Contractor's subcontractors to ensure conformance with relevant requirements in all areas during the execution of the Work. Contractor shall provide Company Personnel and designated representatives timely and free access to all work (documents, records, worksites, etc.) for the purpose of review and audit. Contractor shall ensure that its Subcontractors and vendors are also required to provide this right of access.

# 26.0 LANGUAGE

26.1 The language of this Agreement shall be English and all communications and dealings

under and with respect to this Agreement shall be conducted in the English language.

### 27.0 NO WAIVER

27.1 None of the provisions of this Agreement shall be considered to be waived by Contractor or Company except when such waiver is given in writing. No such waiver shall be or shall be construed to be, a waiver of any past or future default, breach or modification of any of the terms, provisions, conditions or covenants of this Agreement except as expressly stipulated in such waiver.

### 28.0 DUTY OF CARE

28.1 Contractor agrees to use reasonable care, skill, competence and judgment in the performance of the Work hereunder which are generally consistent with the Standards of Prudent Contractor.

### 29.0 ENTIRETY OF AGREEMENT

29.1 This Agreement constitutes the entire agreement between the parties and shall govern the relationship of the parties with respect to the Work. It supersedes all other agreements, either written or verbal, between the parties.

#### 30.0 NOTICES

30.1 All notices shall be addressed as follows or to such other address as either of the parties shall designate by written notice.

## Company:

Nalcor Energy – Lower Churchill Project.

P. O. Box 12800

500 Columbus Drive

St. John's, Newfoundland and Labrador A1B 0C9

Attention:

Ross Beckwith

Email:

rossbeckwith@nalcorenergy.com

Phone

(709) 570-5984

Fax:

(709) 737-1985

### Contractor:

MWH Canada, Inc.

505 Burrard Street, Suite 1580 One Bentall Centre Vancouver, BC, V7X 1M5

Attention:

Nik Argirov, M.Eng., P.Eng., PMP - Vice President and

**General Manager** 

Email:

nik.ar grov@mwh gobal.com

Phone

(604) 648-6162

Fax:

(604) 648-6181

# 31.0 SURVIVAL

31.1 The following provisions of this Agreement shall survive the termination or expiration of this Agreement and remain in full force and effect: Articles 3.0, 8.0, 10.0, 11.0, 12.0, 13.0, 15.0, 16.0, 17.0, 18.0, 21.0, 22.0, 26.0, 27.0 and 30.0.

## 32.0 EXECUTION

IN WITNESS WHEREOF the parties have executed this Agreement as of the day and year first above written.

NALCOR ENE

Per:

MWH CANADA, INC.

Per:

NIK ARGIROV, VP DAMS EHYDRO

Hty / Coon

Per:

Jeffrey L. Coon, Senior Vice President

# **APPENDIX A**

# **SCOPE OF WORK**

#### **APPENDIX A - SCOPE OF WORK**

# 1.0 <u>Background and Owners:</u>

The Lower Churchill Project (LCP) is a hydroelectric development involving generation on the Churchill River in Labrador and associated transmission systems. Power will be moved from Labrador to the island of Newfoundland via the Labrador-Island Link (LIL) and from the island of Newfoundland to Nova Scotia via The Maritime Link (ML) via subsea cables across the Strait of Belle Isle (SOBI) and Cabot Strait respectively.

Nalcor Energy (Company) will partner with Emera Newfoundland and Labrador Limited (ENL) which is a wholly-owned subsidiary of Emera Inc. of Halifax. ENL is responsible for the ML project.

LCP is comprised of the following three separate but inter-related projects (each a "Project") for which Company is responsible:

- Muskrat Falls Generation Project (MF);
- Labrador-Island Link Project (LIL); and
- Labrador Transmission Assets Project (LTA).

The three Projects will be owned by different owners (each an "Owner"). MF and LTA will each be owned by a separate subsidiary of Company. LIL will be owned by a limited partnership in which the partners will be Company and Emera or their subsidiaries.

Company will manage the SOBI marine crossing project which involves installation of subsea cables and connection to onshore facilities. SNC-Lavalin Inc. (SLI) has been selected by Company as EPCM contractor for all other aspects of LCP.

Company will borrow funds for development of the Projects for which the Government of Canada has committed to provide a loan guarantee. The financing will involve rating agencies, lenders, the federal Guarantor, and other organizations. Sanction of the projects is expected in late-2012 and financial close is expected by late-2013.

The Work described herein is required for rating agencies, lenders, guarantors, and other organizations that may be involved in providing financing for LCP, rather than on behalf of Company or its affiliates or partner. This Agreement is issued by Company on an interim basis and will be assigned or replaced as described in section 3.0 below.

# 2.0 **Scope of the Work:**

The Work is for the provision of the following services for LCP:

- a) Independent Engineer (IE) services in accordance with Attachment No. 1 to this Appendix A during development and construction of LCP.
- b) Operating and Maintenance (O&M) monitoring services in accordance with Attachment No. 2 to this Appendix A subsequent to commencement of commercial operations.

# 3.0 Client and Assignment:

Contractor's client for each Project is not the Owner of that Project but, instead, the lenders, the hedge providers, the federal government as guarantor, and such other entities as may be involved in providing financing for, or financial guarantees in support of, each of the Projects (initially and collectively "Client"). The rating agencies have been engaged and both the rating agencies and the federal government have already commenced their review of LCP. The lenders, hedge providers and others will be, but have not yet been, engaged.

The role of the IE is to provide independent engineering advice and independent engineering reports. Given the size, scope, and complexity of LCP, and the schedule for achieving financial close, Contractor will initially be retained and paid by Company on behalf of the Clients so that Contractor can familiarize itself with each of the Projects and LCP as a whole, identify the documents and information that will be required for its IE review, and commence an initial review of the documents and information currently available.

When the lead lenders for each Project are known, or as otherwise required, the Agreement will be retained separately, either directly or indirectly, by those lenders and by the hedge providers and federal guarantor, as the "Client" for that Project, provided Contractor is acceptable to those lenders. Contractor will then take instructions from and report directly to that Client in relation to that Project. Contractor will execute any assignments, novation instruments or further agreements as may be required by each of the lender Clients to give full effect to that arrangement and, at their discretion, may be required to issue separate, independent reports for each Project and, in addition, a consolidated report for the entire LCP Project incorporating those independent reports.

### 4.0 Phases:

The Work will be executed in accordance with the following:

Phase 1 – prior to financial close

Phase 2 – subsequent to financial close

# 5.0 <u>Independence</u>

Until Contractor is retained by the lenders as its Client, Contractor shall act at all times as if it is already retained by the lender Clients and shall not put itself in a position that will compromise its ability to fully, frankly and impartially provide independent services and advice to them.

# 6.0 Representatives:

Company: Lance Clarke – Commercial Manager

Contractor: Rey Hokenson – Project Manager

# 7.0 Milestone Dates:

Contract award: August 27, 2012

Kick-off meeting and initial site visit: August / September 2012

Assignment to Clients: As required Phase 1 IE report per Attachment No. 1: Q3 2013
First power\*: Late-2016
Completion of IE services: Late-2018

Commencement of O&M services: 2019

# 8.0 <u>Health, Safety, and Environment:</u>

The work shall comply with the requirements of Appendix E.

# 9.0 Quality:

The work shall comply with the requirements of Appendix F.

# 10.0 Reporting:

Contractor is required to submit bi-weekly time and material reports for Company approval, per Attachment No. 4, no later than three (3) days after the end of the period being reported in both signed and native file format (ie. MS Excel).

Contractor is required to submit monthly cost reports for Company approval, per Attachment No. 5, no earlier than the 24<sup>th</sup> of the month being reported and shall be

<sup>\*</sup> commissioning and release for commercial operation of the first generation unit

submitted to Company <u>no later than three (3) business days</u> after month end. The actual cutoff date for reporting will be as agreed with the LCP project controls group.

All reporting, including timesheets, will be submitted to the attention of the Lower Churchill Project **Document Control**.

Email: <a href="mailto:lcpdcc@nalcorenergy.com">lcpdcc@nalcorenergy.com</a>

Fax: (709) 737-1985

# 11.0 Schedule and Progress Reports:

Contractor shall submit a schedule within two weeks of the kick-off meeting relative to the tasks identified in Attachment No. 1 to this Appendix A. That schedule will identify key assumptions and will be of sufficient detail to permit management and forecasting of the work.

Contractor shall revise or update such schedule from time to time as required as more information is made available to it. Contractor shall also submit a revised schedule relative to changes to scope or execution methodology as may be agreed with Company from time to time.

Attachment No. 1 requires Contractor to submit periodic reports as required. In such reports, Contractor shall identify deficiencies, discrepancies, and concerns it identifies pursuant to its review of the performance of Company's other contractors.

# 12.0 Regulatory

Contractor is responsible for mobilizing all equipment, tools, components, consumables, and personnel. Contractor's responsibilities will include, to the extent applicable, customs clearance, foreign worker authorizations, and contact with all related agencies and authorities including the following:

- Canada Revenue Agency (CRA)
- Canada Border Services Agency (CBSA)
- Human Resources and Development Canada (HRDC)
- Citizenship and Immigration Canada (CIC)
- Workplace Health, Safety and Compensation Commission (WHSCC) of NL

Contractor must be registered with CRA to collect harmonized sales tax (HST) with each invoice. Company may effect withholdings and retentions pursuant to Clause 11 of the Agreement.

# 13.0 Deliverables:

The requirements of Appendix A, E, F, and G can be summarized as follows; for guidance only; Contractor is responsible for assuring all requirements are met:

Delive	rables:	No. of Copies			
Туре	Description		Paper	Electronic	Due Date
Plan	Project Health and Safety Management Plan		0	1	2 weeks after kick-off meeting
Plan	Workscope Quality Plan	0	1	Within 45 days of effective date	
	Schedule for Phase 1 Tasks	0	1	2 weeks after kick-off meeting	
	Project Organization Charts w Position Descriptions for Key	0	1	2 weeks after kick-off meeting	
	Independent Engineer's	Draft	0	1	
	Report – Phase 1	Final	0	1	As required by
	Certificates required at finance	0	1	Attachment 1.	
	Certificates, reports and summaped in Attachment 1	0	1		
	Independent Engineer's draw	0	1	Monthly	
	Quality report	0	1	With IE periodic report	
	Safety report with performan	0	1	Monthly	
	Independent Engineer's period	0	1	As required	
	Schedule updates and revision	0	1	As required	
200	Notification of incidents	0	1	Within 24 hours	
	Incident investigation reports	0	1	Within 14 days	

# 14.0 Personnel Assigned:

Contractor will provide the personnel identified in Appendix B.

# 15.0 Subcontractors

Personnel per section 14.0 involve the following subcontractors:

BBA Engineering
Energy Cable Consultants
Enventure
LGL Limited
Quanta Technology

# 16.0 Organization

Per the charts provided in Attachment No. 6.

# 17.0 Attachments

- Attachment 1 Detailed Scope of Work Independent Engineer
- Attachment 2 Detailed Scope of Work Operations and Maintenance Monitoring
- Attachment 3 Contractor's Estimated Costs
- Attachment 4 Contractor Bi-weekly Time and Material (T&M) Sheet
- Attachment 5 Contractor Monthly Cost Report
- Attachment 6 Contractor's Organization Charts

#### ATTACHMENT NO. 1 – DETAILED SCOPE OF WORK – INDEPENDENT ENGINEER

Phase 1 scope includes the following, will commence in August 2012 on behalf of Company, will transition to lenders and/or the guarantor when required, and is intended to enable the IE to become familiar with the projects, to identify required documentation, and to commence an initial review prior to engagement of lenders:

- review project design and projected performance
- review construction plan and schedule
- review capital budget
- review commercial operation and maintenance services
- review project agreements (such as power purchase agreements)
- review permits and licenses
- review basis of project pro forma financial model
- prepare Independent Engineer's report
- support financial close

Additional details are provided in tasks 1 through 11 in section A below.

Phase 2 commences with financial close, expected in Q3 / Q4 2013, and consists of the following which are described in greater detail in section B below:

- attend project review meetings
- monitor engineering and procurement relative to milestone schedules
- conduct site visits and review quality control document to assess compliance with milestone schedules
- review change orders to construction contracts
- prepare periodic and final reports and other documentation
- verify project completion

# PHASE 1: PROJECT TECHNICAL REVIEW PRIOR TO FINANCIAL CLOSE

The Independent Engineer's Phase I review will be based upon the Project documentation and written information provided by Company or the Owners in response to the data request and site visit.

# Task 1: Initial Project Scope Meeting and Obtain Project Documentation

The Independent Engineer will attend a meeting with the Client, Company, the Owner, and their respective advisors during which time: the scope of services will be finalized and agreed; the data and documentation required to conduct those services will be defined; a proposed site

visit will be discussed and arrangements finalized; and the date by which the draft report is to be issued by Contractor will be agreed.

At this initial meeting, the format of the IE reports will be discussed and agreed, including the procedure for submission of drafts for comment, incorporation of comments, and production of final versions of the report. If the lender Clients subsequently require a different format or process for such reports, the Independent Engineer will comply with their requirements.

### Task 2: Site Visit

Contractor will visit the MF site, the site of the AC/DC Converter Stations, the site of the switchyards, the sites for the crossing of Strait of Belle Isle and, if required, selected portions of the proposed transmission route. The purpose of the visit is for Contractor to familiarize itself with the sites and to verify and confirm whether there are any unusual characteristics of the sites that could present significant obstacles to successful completion of each Project. In particular, the Independent Engineer will review and comment on:

- General topography and condition of the grounds and equipment;
- Storage and lay-up procedures for installed and yet to be installed equipment;
- Location and storage conditions for uninstalled equipment and materials;
- Confirm current status of construction completion and major items to be completed; and
- Access to and status of construction of off-site facilities for interconnection to electric power, water, waste disposal, and fuel supply.

# Task 3: Review Project Design and Projected Performance

Contractor will review available Project documentation for the purpose of identifying missing, inconsistent or unresolved information.

Contractor will assess the compatibility of the basis of design with the Project operating requirements, site characteristics, hydrology characteristics and off-site transportation requirements.

Generally, Contractor will review the design of major on-site facilities included within each Project, as well as Project-related, off-site facilities within the scope of the Project to support construction and operating activities. Major equipment components and systems will be reviewed by mechanical, electrical, civil/structural and environmental engineers with regard to:

- Capability of design to perform as required;
- Capability of design to meet availability and reliability requirements; and

 Conformance of design with "good engineering practice" (i.e., industry standards and prudent utility practice).

Any major equipment component or system design feature that does not appear to meet design, performance or operating requirements, or fails to adhere to good engineering practice will be identified. Contractor will provide an opinion on the quality of the design and equipment with respect to its effect on the anticipated service life of the Project, the degree of maintenance needed to meet performance requirements, long-term availability and anticipated performance degradation over the term of the Client's interest in the Project.

Contractor will also review the extent to which each major equipment component for the Project has been operating commercially under comparable conditions in other locations, and comment as to the anticipated performance based on their proven performance in other locations.

Contractor will review the technical design of the Project, projected performance for compliance with generally accepted industry standards and prudent utility practices, and the ability to operate in accordance with Pro Forma projections and contract requirements. In general, the following will be addressed to the extent applicable to that Project:

- Compare projected performance to design conditions, vendor guarantees and known performance of other similar facilities;
- Review hydrology;
- Review design, performance and integration of the major systems, as well as the projected reliability and operations under various operating conditions;
- The capability of the Project as designed to meet its operating, contractual and other requirements (e.g., as specified in the applicable agreements);
- Review major systems and equipment design criteria and performance to confirm their suitability, compatibility and completeness for the intended service of the equipment, and in particular that the design is conservative, that proven reliable equipment and systems are utilized, and that operating environments and parameters for equipment are within established precedents;
- Review and discuss the commercial operating history of major equipment in comparable applications, as well as Project-specific equipment performance;
- Review the proposed electrical interconnections between each Project;
- Review the projected water supply, wastewater disposal systems and other applicable waste disposal plans, historical performance and projected performance;
- Review the various technical criteria and other provisions within the technical documents and, if available, contracts for consistency;
- Review the experience and capability of the major Project participants to perform their roles in each Project and to support the successful execution and completion of the Project.

#### Task 4: Review Construction Plan and Schedule

Contractor will review the construction plan for each Project, including the following.

#### **EPCM Contract**

Contractor will review the scope of services and technical provisions of the Engineering, Procurement and Construction Management Contract ("EPCM Contract") to identify that:

- The responsibilities of the parties are clearly defined under the contract, such as those associated with the EPCM contractor's and Owner's responsibilities; and
- The scope of work, communication and interface requirements between the EPCM Contractor, Owner, other contractors, and dispute resolution provisions are clearly defined.

The EPCM Contract is currently a single contract, and it is intended to be separately applicable to each Project. Contractor will review and report on the EPCM Contract as it is applicable to the relevant Project, and its ability to integrate each Project with the other Projects.

#### **Construction Contracts (other than EPCM Contract)**

Contractor will review the construction plan for each Project, including:

- Review the scope of supply and technical provisions in the supply and construction contracts including:
  - Qualification of contractor(s);
  - Qualification and selection of major subcontractors;
  - Completeness of scope of work;
  - Extent to which the contracts can be performed independent of other contracts and the clarity of the battery limits of each contract;
  - Contractor and Owner's responsibilities;
  - Provisions for guarantees, warranties and latent defect periods;
  - Change order procedures;
- Review the transportation plan for delivery of equipment and materials to the appropriate site(s);
- Review the logistics and storage of construction materials on and off-site;
- Comment on the conformity of the proposed contracts relative to industry standards and prudent utility practice; and

 Review compensation terms and methods of payment relative to industry standards and loan document requirements.

#### **Guarantees and Liquidated Damages**

Contractor will review the completion and, where applicable, performance guarantees and associated liquidated damages and bonus payments, buydown and buyout provisions, liquidated damage caps, and total liability provided by the contractors and major equipment suppliers.

Contractor will review and comment on the guarantees provided by each of the construction contractors and major equipment suppliers to assess the potential for compliance with the applicable Project contracts, permits and performance expectations. Contractor will also review and comment on guarantees provided by each major equipment manufacturer, to the extent that this information is available, to assess the level of support that these equipment guarantees provide to the Owner.

#### **Construction Schedule**

Contractor will review the Project schedule and each of the construction schedules and determine whether adequate provisions have been made for design; equipment procurement, fabrication, shipment and installation; and start-up, shakedown, testing and commissioning of the Project. Any unknown or variable elements in the schedule will be identified along with associated potential risks.

#### Contractor will also:

- Review and assess the Project construction, engineering and procurement schedules and critical paths including analysis of the major third party deadlines;
- Comment on the likelihood of achieving Project construction milestones in accordance with the completion requirements of the Project; and
- Review the major equipment supply contracts with regard to performance guarantees to assess the level of support provided to the contract guarantees.

# **Performance Test Criteria**

Contractor will review the performance test criteria for each contract and major equipment supply package, as applicable, and review the performance test criteria for the Project, and also where applicable its integration with the other Projects, as provided by the Owner, and will comment on the following:

Reasonableness of the performance test criteria;

- Adequacy of the test duration;
- Ability to extrapolate test results over the expected life of the Project;
- Conformance of test procedures to establish codes and standards for testing Project equipment; and
- Ability to achieve all conditions required by the EPCM Contract and by each of the individual contracts.

#### **Task 5: Review Capital Budget**

#### **Total Project Cost Estimate**

#### Contractor will generally:

- Review the scope of supply and corresponding cost estimate methodology for all Project costs, including but not be limited to the engineering, procurement and construction contracts. This review will include, but not be limited to items such as Project management, spare parts, working capital and start-up costs;
- Evaluate to what extent cost items, which are part of the total Project cost estimate, are based on estimates versus fixed pricing; identify those items that are not based on fixed pricing along with the potential risks associated with these variables; and evaluate the level of contingency budgets compared to those of similar Projects with which it is familiar; and
- Review the cost estimate for any remaining facilities to assess the methodology used to develop the total Project cost estimate.

In particular, Contractor will review and comment on the construction scope and the cost estimate methodology used to determine the Project construction cost, including:

- Project Manager and construction contractor experience, compensation and budgets;
- Major equipment procurement costs;
- Interconnection and infrastructure completion costs;
- Spare parts;
- Contingencies;
- Start-up and commissioning costs;
- Camp costs;
- Ancillary infrastructure and services, including access and construction power, required to support the Project;
- Schedule of equipment delivery and work to be performed taking into account the issues associated with the site layout and location;
- Schedule of values and construction cash flow: and
- Allowances for contractor performance bonuses.

Agreement number LC-PM-082 between MWH CANADA and NALCOR ENERGY. Page 37 of 92 Contractor will highlight critical areas of cost structure and identify high sensitivity areas.

Contractor will provide a comparison relative to the public electrical utility industry and compare to facilities of a similar size and technology taking into consideration such items as location, available infrastructure, and labour costs.

As the Project is not being constructed under a single EPC contract, Contractor will apply particular focus on the associated price risks.

#### **Drawdown Schedules**

Contractor will review the drawdown schedule generally appended to the contracts or, if not appended, the estimated drawdown schedule, and comment on whether each monthly cash drawdown amount is consistent with the Project schedules.

#### Task 6: Review Commercial Operation and Maintenance Services

#### **Review Commercial Operation Services**

Contractor will conduct an engineering review of the Operations and Maintenance (O&M) Plan and, if available, contracts and agreements for operation and maintenance. Contractor's review will be limited to engineering issues and their possible impact on commercial issues and will not address legal or regulatory issues associated with the Project.

#### Operations and Maintenance Plan

Contractor will review the Project's O&M Plan, including the adequacy of the start-up and longterm operating procedures; the reasonableness of the annual O&M budgeting process, as well as the O&M fee structure and its ability to cover "non-extraordinary expenses"; the definition of "extraordinary expenses"; and the proposed training and preventative maintenance programs.

#### **Operating and Maintenance Cost Estimate**

Contractor will review the list of O&M and major maintenance cost estimate components, comment on its completeness and the basis and assumptions upon which each component was calculated and comment on their reasonableness. This effort will include a review of staffing, maintenance provisions, spare parts, water, waste disposal, administrative costs, management fees and consumables.

#### **Task 7: Review of Project Agreements**

Contractor will review the ability of the Project, based on the design criteria, to meet the operating and technical requirements of the applicable operating agreements and the financial goals for the Project, including but not limited to the following to the extent applicable to the Project:

- Power Purchase agreements;
- Interconnection facility agreements;
- Water Management Agreement;
- Water supply and wastewater disposal agreements;
- Fuel supply and transportation agreements;
- Operation and maintenance agreements;

Contractor will comment on contract provisions to market norms with respect to:

- Term and termination;
- Budget review and control;
- Owner/Operator Responsibilities;
- Operations and maintenance plans;
- Environmental compliance;
- Reporting procedures;
- Compensation and incentive bonus and penalty structure to determine cost effectiveness and compatibility with long term operations and maintenance objectives; and
- Consistency amongst construction, operation and maintenance, service, fuel, capacity and energy sales, water management, both amongst each other and compliance with the environmental permits and requirements.

#### Power Purchase and Interconnection Agreement(s)

Contractor will review the technical aspects of the agreements to determine if the provisions are compatible with the expected output of the Project and that the design conforms to the interconnection requirements of the contracts. Specifically, Contractor will review the conditions that must be satisfied to qualify for full energy and capacity payments, and conditions under which the utility can dispatch the Project or limit its power output.

#### Water Usage Agreements

Contractor will review the Water Management Agreement and determine whether it allows the Project to perform to its projected capacity.

#### **Loan Documents**

Contractor will review the technical aspects in the financial agreements to ensure consistency with Project contracts and performance assumptions, including for example:

- Budget review and approval process; and
- Owner/Operator reporting requirements.

#### Task 8: Review of Permits and Licenses

Contractor will assess the ability of the Project, based on design criteria and intended modes of operation, to meet and maintain compliance with technical requirements of the applicable major permits including reporting requirements and other operating restrictions.

Contractor will review the schedule of permits, licenses and approvals required from authorities having jurisdiction for construction and operation, and all available permits or permit applications. Contractor will:

- Assess the capability of the Project as designed to meet the technical requirements and constraints (e.g., operating restrictions, etc.) specified in the Project's permits, licenses and approvals;
- With the assistance and approval of the Owner, establish contact with the appropriate provincial and federal environmental or energy regulatory agencies for the purpose of independently identifying and determining the current status of the major permits, licenses and approvals to construct and operate the Project, provided however that the Independent Engineer shall closely coordinate all such contacts with and through the Owner;
- Identify what major permits, licenses and approvals have not been obtained and comment, from a technical perspective, on the likelihood that they may or may not be able to be obtained in a timely manner to support the Project schedule;
- Review the adequacy of budgeted amount in the capital budget to obtain and maintain compliance with the permits, licences and approvals, including the cost of habit compensation measures and meeting commitments made by the Owner in its application(s) for same;
- Address technical and commercial issues arising from zoning, local municipality requirements or other agencies having jurisdiction over the Project; and
- Review environmental site assessment report(s) prepared by others and comment on such issues as:
  - Documentation and support for the conclusions reached in the report;
  - Unusual circumstances or locality specific issues; and
  - Status and cost of any required remedial activities.

# Task 9: Review of Pro Forma Assumptions

Contractor will review and comment on the technical assumptions and data input to the Owner's Project pro forma financial model which sets forth the projected revenues, expenses and debt service costs of the project. The performance model used by the Owner to estimate annual water usage and operating costs and annual revenues from the sale of power will be evaluated to determine if it accurately reflects the material Project contracts and expected operating environment. Contractor will determine how well the assumptions and Projections made in the pro forma are supported by contract guarantees, performance testing, quality of the design and equipment, and the experience of the Project participants.

It is anticipated that the revenue portion of the pro forma will be based on fixed monthly payments and therefore extensive review of market studies by the Independent Engineer is not anticipated or required.

Contractor will verify that the following assumptions are reasonable and consistent with the design of the Project, expected operating scenarios, and Project agreements:

- Project performance and reliability;
- Revenue projections;
- Facility performance degradation;
- Dispatch constraints (if any) as per the power purchase agreement including curtailments and part load operation;
- Escalation assumptions;
- Annual operating and maintenance expense inputs to the pro forma, including major maintenance and capital replacement;
- Bonus/penalty arrangements;
- Working capital requirements of the Project;
- Cost for establishing inventories; and
- Adequacy of pre-operating expense budget; i.e., operator training, consumables, lubricants and testing.

Contractor will propose and review a set of typical pro forma sensitivity cases. Sensitivity cases will be selected to test the impacts of variances in key operating assumptions, such as; interest rates, inflation, capacity and heat rate and operating expenses. Review and comment on sensitivity cases to the base case pro forma.

# Task 10: Prepare Independent Engineer's Report

Contractor will prepare a draft and final Independent Engineer's Report, in a format suitable to the Client.

The report will provide a brief description of the Project facilities and key agreements and will set forth the principal assumptions, opinions, conclusions and summarized pro forma operating results. During the course of its review, Contractor will bring to the Client's and the Owner's attention any area of risk that is discovered as a result of the technical review and any mitigation options to be considered by the Client and the Owner.

A draft of the Independent Engineer's Report setting forth preliminary opinions, conclusions and pro forma results, including discussions of any unresolved issues and associated risks identified during the review, will be prepared and submitted to the Client and the Owner for review and comment. Having addressed issues raised in the draft report, to the extent possible, Contractor will incorporate the Client's comments, and consider and at its discretion address the Owner's comments, and present the status of each issue in the final Independent Engineer's Report.

# **Task 11: Financial Closing Support Services**

Contractor will support financial close by providing information on the Project to the Clients, including prospective investors or lenders, hedge providers and the federal guarantor, either in person or via conference calls. Contractor will also participate in rating agency meetings and syndication presentations as requested by the Client. Contractor will prepare the typical and customary certificates required at financial closing to verify the accuracy of the information provided in its report.

#### **Task 12: Project Management**

Contractor will effect project management as required to effectively execute the work.

#### **PHASE 2: CONSTRUCTION PERIOD**

Contractor will perform the following tasks following financial close and during the construction of the Project.

#### **Attend Project Review Meetings**

Contractor will attend Project review meetings (with required frequency as determined by the Independent Engineer in consultation with the Client and the Owner) at the Owner's or the contractors' offices to assess progress in engineering, procurement and construction activities and to review the contractors' presentation of areas of concern and change orders.

#### **Services Relating to the Engineering**

Contractor will review the progress of the remaining engineering for compliance with the milestone schedule.

#### **Services Relating to Procurement**

Contractor will review the progress of the award of major procurement contracts and delivery commitments for conformity with the milestone schedule.

#### **Services Relating to Construction and Start-Up**

#### Contractor will:

- Review proposed work and quality control plans;
- Conduct periodic on-site visits (with required frequency as determined by Contractor in consultation with the Client and the Owner) for observation of the work in progress to determine that the Project is proceeding in general accordance with the milestone schedule and with the agreed-upon design concepts;
- Periodically review quality control reports and field laboratory test reports;
- Consult with the Owner and contractors in advance of scheduled major inspections, tests or the start of important work phases;
- Review compliance to the Project schedule on a monthly basis through reports submitted by the construction contractors, and on-site observation; and
- During the on-site visit, review the contractors' monthly invoice with the Owner and construction contractors to verify accuracy.

# **Review Change Order(s) to the Construction Contracts**

To the extent required by the financing agreements, Contractor will review major change orders to the construction contracts. The review will include a verification of the impact of change(s) on the construction cost and schedule of the Project and on the ability of the Project to meet its performance guarantees. Review of major change orders or significant changes in Project execution or budget will be performed if required by the financing agreements at Client's authorization but will constitute additional services.

### **Prepare Independent Engineer's Periodic Report**

Contractor will review the borrower's, and construction contractors' progress report(s) and supporting documentation against observations during the site visit and prepare a summary report. The report shall cover the general status of construction versus the milestone schedule, the status of the budget versus actual expenditures, status of planned contract expenditures versus planned, status of change orders or claims and any areas of concern and actions being taken of which we are aware. Contractor's report will be submitted to the Client, with a copy to the Owner.

#### **Prepare Independent Engineer's Draw Certification**

Contractor will review the Client's monthly loan requisition certificate and supporting documentation, will compare the actual budget and schedule against the contract budget and schedule, will request changes or supplemental information as required to approve drawdown requests, will prepare the monthly independent Engineer's draw certification that will make a recommendation to the Client regarding the payment due and will submit same to the Client, with a copy to the Owner.

#### **Verify Project Completion**

Contractor will confirm Project completion as required by the financing agreements which will include, but not be limited to, the review of construction contracts' completion certificates, monitoring successful completion of each punch list item by telephone, make one final visit to the Project site to verify punch list items have been completed, sign the appropriate document and submit it to the Client, with a copy to the Owner.

Contractor will also provide such certification to the Client as may be required by the financing agreements, including certification that the engineering, design, construction, testing and commissioning of the Project conforms to the applicable contracts, codes, standards, good industry practice and prudent utility practice.

# ATTACHMENT NO. 2 – DETAILED SCOPE OF WORK – OPERATIONS & MAINTENANCE MONITORING

Contractor shall provide operations and maintenance (O&M) monitoring services subsequent to commencement of commercial operations for a five year renewable period. Annual O&M reports will be provided in a suitable format. The work will require attendance at relevant field facilities including the following:

- generation facilities at Muskrat Falls
- transmission line from Muskrat Falls to Forteau Point
- converter station, transition compound, and electrode station in Forteau Point area
- converter station, transition compound, and electrode station in Shoal Cove area
- transmission line from Shoal Cove to St. John's

Each such series of site visits will involve a team of four or five individuals and will require approximately six days excluding travel from and to the home base of Contractor's personnel.

A typical work scope is provided in the following table.

		Approx Dura (da	tion	
Day	Activity	Travel	Work	Description
1	Travel Vancouver to St. John's	1		
2	Travel St. John's to Goose Bay and Muskrat Falls	1/2	1/2	Site meeting with operations and maintenance representatives. Commence site visit.
3	Assess Muskrat Falls		2	View dam, spillway, reservoir rim via boat; view tailrace; review power station and switchyard; view spar parts inventory; discuss issues; discuss any outages; view instrumentation readings and typical monitoring stations; discuss ice issues, debris handling, and performance issues.
4	Muskrat Falls to Forteau Point via helicopter	1/2	1/2	View representative locations and vegetation control along transmission line.
5	Forteau converter station, transition compound, and electrode station		1/2	Observe overall condition of each facility; discuss issues, performance, and outages with operations and maintenance personnel.

		Approx Dura (da	tion	
Day	Activity	Travel	Work	Description
6	Forteau Point to Shoal Cove via helicopter, Shoal Cove converter station and transition compound		1/2	Observe overall condition of each facility; discuss issues, performance, and outages with operations and maintenance personnel.
7	Shoal Cove to St. John's via helicopter	1/2	1/2	View representative locations of transmission line and observe electrode station.
8	Meeting in St. John's		1	Discuss observations; share photos with attendees; discuss budget adequacy; discuss permit compliance; discuss spare parts inventories; discuss permit compliance; review any monitoring measurements; review health and safety reports; address questions of staff; go over main recommendations based on observations.
9	Travel St. John's to Vancouver	1		
	Total	3-1/2	5-1/2	

# ATTACHMENT NO. 3 - CONTRACTOR'S ESTIMATED COSTS

Estimated costs per Contractor's proposal and subsequent clarifications can be summarized as follows and are presented for reference purposes only; actual results will be based on Client's requirements, acting reasonably, and Contractor's best commercially reasonable efforts to provide the requested services in the most economical manner.

#### 1.0 Independent Engineer Services

By Year

		Est.	Es	timated Cost	(\$)
Year	Phase	Hours	Labour	Expenses	Total
2012	1	3,848	761,392.00	45,010.00	806,402.00
2013	2		914,575.00	97,720.00	1,012,295.00
2014	2	0 10 <del>10 10 1</del>	844,501.00	112,120.00	956,621.00
2015	2		760,970.00	90,520.00	851,490.00
2016	2		756,050.00	97,720.00	853,770.00
2017	2		722,305.00	90,520.00	812,825.00
2018	2		1,116,261.00	143,320.00	1,259,581.00
		24,906	5,114,662.00	631,920.00	5,746,582.00
Total		28,754	5,876,054.00	676,930.00	6,552,984.00

**Bv Task** 

		Est.	Es	timated Cost	(\$)
Phase	Task	Hours	Labour	Expenses	Total
1	1	128	25,248.00	4,000.00	29,248.00
	2	364	78,134.00	18,480.00	96,614.00
	3	191	40,612.00	0.00	40,612.00
	4	573	116,118.00	2,000.00	118,118.00
	5	200	44,687.00	0.00	44,687.00
	6	102	22,770.00	0.00	22,770.00
	7	129	27,846.00	0.00	27,846.00
	8	94	18,135.00	0.00	18,135.00
	9	137	29,647.00	0.00	29,647.00
	10	1,184	227,787.00	0.00	227,787.00
	11	193	39,133.00	11,800.00	50,933.00
	12	553	91,275.00	8,730.00	100,005.00
		3,848	761,392.00	45,010.00	806,402.00
2	,	24,906	5,114,662.00	631,920.00	5,746,582.00
Total		28,754	5,876,054.00	676,930.00	6,552,984.00

These estimates are based on the assumption that commissioning and release for commercial operation of the first generation unit (first power) will occur in late-2016, that commissioning of the other three generation units (approximately 9 months), performance testing, and final financial project closure will take an additional 24 months.

# 2.0 Operations and Maintenance (O&M) Monitoring Services

#### **First Five Years**

		Estimated Cost (\$)						
Year	Hours	Labour	Expenses	Total				
1	2,214	439,206.67	82,640.43	521,847.09				
2	1,336	265,031.66	49,867.94	314,899.60				
3	1,336	265,031.66	49,867.94	314,899.60				
4	1,336	265,031.66	49,867.94	314,899.60				
5	1,550	307,484.34	57,855.76	365,340.11				
Total	7,772	1,541,786.00	290,100.00	1,831,886.00				

	ver Chur tractor	energy energy chill Project Bi-Weekly Time & M	laterial (T&M)	WO DESCRIPTION									TOTAL HOURS PER PERSON PER DAY
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Con	tractor:			Approved Hours									ERSC
				Approved Changes									PER
				Total Approved	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	URS
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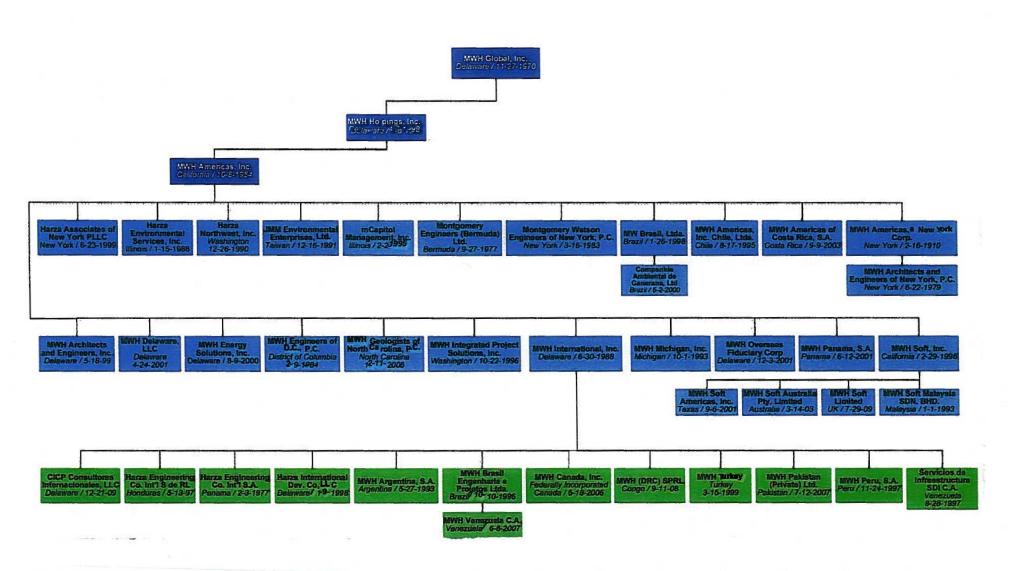
Original to be kept by Contractor with copy provided to NLH Representative



# **LOWER CHURCHILL PROJECT**

Contractor Month	nly Cost Repo	rt							
Period Ending : <u>DD - M</u>	M - YY								
Service Provider:		ı							
Contractor Ref No.:		į							
WBS Ref No.		i				ĺ			
						•			
Note: Include a seperate	section for each Wo	ork Task Order and	Summarize						
Budget Summary									
Work Task Order No.:									
Cost Element	1) Original Budget	2) Approved Changes	3) Current Budget ( 1+2)	4) Committed Cost To-Date	5) Incurred Cost To-Date	6) Invoiced To- Date	7) Final Forecast Cost	8) Variance (7-3)	Comments
Salaries			\$0					\$0	
Materials			\$0	1.00				\$0	
Expenses			\$0					\$0	
Software			\$0					\$0	
Other			\$0					\$0	
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Notes: 1) Committed Cost To-Date 2) Incurred Cost To-Date 3) Final Forecast Cost = Summary of Key/Critics	= Value of work or Projected final cost	services performed	as of period ending		od ending.				

# **MWH Corporate Organizational Chart**



MWH Proposal | March 9, 2012

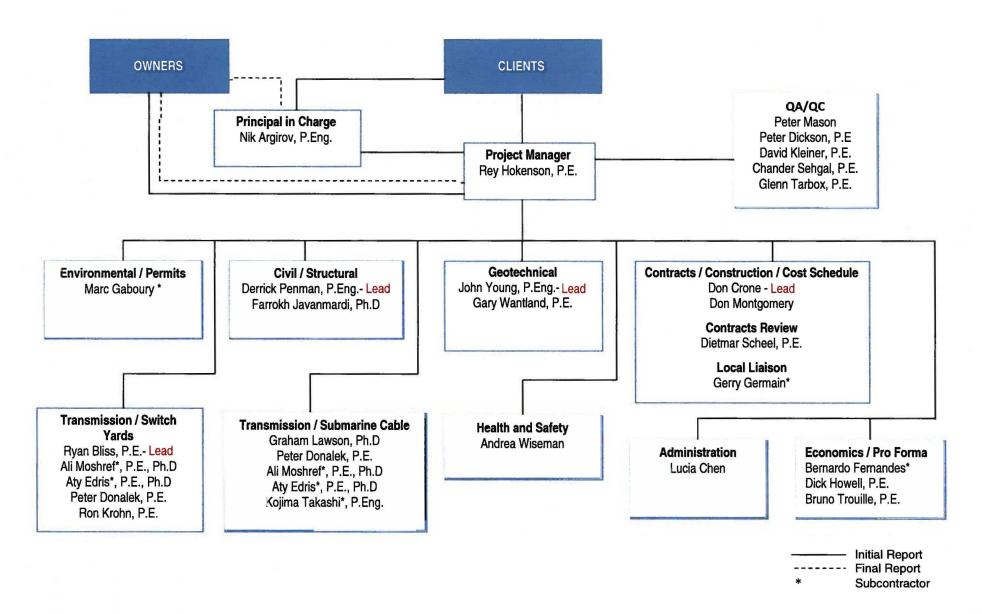
<sup>3-4 |</sup> Corporate Organizational Chart. Technical Questionna're

# CIMFP Exhibit P-02174 MUSKRAT FALLS GENERATING PLANT

#### **OWNERS CLIENTS** QA/QC Peter Mason **Principal in Charge** Nik Argirov, P.Eng. Peter Dickson, P.E **Project Manager** David Kleiner, P.E. Chander Sehgal, P.E. Rey Hokenson, P.E. Glenn Tarbox, P.E. **Environmental / Permits** Civil / Structural Geotechnical **Contracts / Construction Economics / Pro Forma** Marc Gaboury\* Derrick Penman, P.Eng.- Lead John Young, P.Eng.- Lead / Cost Schedule Bernardo Fernandes\* Farrokh Javanmardi, Ph.D Masoud Mohajeri, P.Eng., Ph.D Dick Howell, P.E. Don Crone - Lead Mike Rogers, P.E. - RCC Mike Bruen, P.E. Bruno Trouille, P.E. **Don Montgomery** Terry Arnold, P.E. - RCC Gary Wantland, P.E. **Contracts Review** Dietmar Scheel, P.E. **Local Liaison Transmission / Switch Yards Hydraulics** Mechanical Administration Gerry Germain\* Ryan Bliss, P.E.-Lead Farzin Arefi, P.Eng. Stan Hayes, P.E. - Lead Lucia Chen Ali Moshref\*, P.E., Ph.D Carlos Calderaro, P.M.P. **Power Study** Aty Edris\*, P.E., Ph.D Chris Carroll, P.E. John Haapala, P.E. Peter Donalek, P.E. **Electrical Health and Safety** Ron Krohn, P.E. **Hvdro-Mechanical** Ron Krohn, P.E. - Lead Andrea Wiseman Kojima Takashi\*, P.Eng. Mike Morgan, P.E. Steve Baughn, P.E. Farrokh Javanmardi, Ph.D Mechanical B.O.P. Stan Hayes, P.E. Initial Report **Final Report**



Subcontractor





#### **APPENDIX B - COMPENSATION**

#### 1.0 General

- 1.1 Company shall compensate Contractor for the Work, in accordance with the provisions of this Agreement. Subject to any additional compensation pursuant to a change, the amount of compensation payable to Contractor for the Work is limited to the amounts, rates and prices set out in this Appendix B.
- 1.2 All amounts, rates and prices stated in this Appendix B shall be deemed to include, without limitation, Contractor's:
  - (a) Costs for all matters relating to and associated with the performance of Work. Only those amounts, rates and prices specifically identified in this Appendix B shall be paid by Company to Contractor for the Work, and costs not identified are deemed to be included in the amounts, rates and prices for the Work;
  - (b) Corporate staff activities or any other corporate activities associated with the Work, or any part thereof;
  - (c) All costs of Personnel and taxes. Contractor shall be responsible for all taxes, fees, dues, or any other charges, that may be levied by Authorities, related to the Work; and
  - (d) Costs associated with premiums, renewals or liabilities which Contractor is obligated to pay or bear liability for in accordance with the insurance and indemnity provisions stated in the Articles of Agreement.
- 1.3 Unless otherwise specified herein, amounts, rates and prices in this Appendix B shall not be subject to escalation for inflation or any other reason. The amounts, rates or prices shall not be subject to any condition, and are fixed.
- 1.4 All downtime caused by a breakdown or loss of use of or damage to Contractor's equipment or materials shall be deemed fully included in the amounts, rates and prices herein.
- 1.5 Unless otherwise specifically stated, all amounts, rates and prices herein shall be in Canadian dollars (\$CDN).

#### 2.0 Personnel

Contractor will be reimbursed for hours worked by personnel as supported by bi-weekly time and material reports (Appendix G) approved by Company. Contractor shall be reimbursed at the below listed Hourly Rate(s) for approved personnel. No overtime or premium rates shall apply to hours worked in excess of a standard workday or on

# weekends or statutory holidays.

Indiv	idual		Hourly	S 14 14
No.	Name	Position or Function	Rate (\$)	Note
1	Arefi, Farzin	Hydraulics and power studies	200.00	
		Civil / Structural		
2	Argirov, Nik	Principal In Charge	268.00	
3	Arnold, Terry	Civil / Structural	220.00	
4	Baughn, Stephen	Electrical	195.00	
5	Bliss, Ryan	Transmission / switchyards (Lead)	230.00	
6	Bruen, Michael	Geotechnical	240.00	
7	Calderaro, Carlos	Mechanical / hydro-mechanical	190.00	
8	Carroll, Christopher	Mechanical / hydro-mechanical	185.00	
9	Chen, Lucia	Administrative	80.00	
10	Crone, Don	Contracts / construction / cost estimate (Lead)	227.00	
11	Dickson, Peter	Quality	220.00	
12	Donalek, Peter	Transmission / switchyards	193.00	
		Transmission / submarine		
13	Edris, Aty	Transmission / switchyards	275.00	1
14	Edwards, Mary	Administrative	65.00	
15	Fernandes, Bernard	Economics and pro forma	225.00	2
16	Gaboury, Marc	Environmental	165.00	3
17	Germain, Gerry	Contracts / construction / cost estimate	165.00	
18	Haapala, John	Hydraulics and power studies	177.00	
19	Hayes, Stan	Mechanical / hydro-mechanical	274.00	
20	Hokenson, Rey	Project Manager	238.00	
21	Howell, Dick	Economics and pro forma	215.00	
	Javanmardi, Farrokh	Civil / Structural	170.00	
22		Mechanical / hydro-mechanical		
23				
	Kleiner, David	Quality	290.00	
	Kojima, Takashi	Transmission / switchyards	198.00	
24		Transmission / submarine		
25	Krohn, Ron	Electrical / hydro-electrical	190.00	
No. of		Transmission / switchyards		
26				
	Lawson, Graham	Transmission / submarine	180.00	4
27	Mason, Peter	Quality	240.00	
28	Mohajeri, Mousad	Geotechnical	200.00	
29	Montgomery, Don	Contracts / construction / cost estimate	228.00	
30	Morgan, Mike	Mechanical / hydro-mechanical	200.00	

Individual			Hourly	
No.	Name	Position or Function	Rate (\$)	Note
31	Moshref, Ali	Transmission / switchyards	275.00	5
32	Penman, Derrick	Civil / Structural (Lead)	230.00	
33	Rogers, Mike	Civil / Structural	228.00	
34	Scheel, Dietmar	Contracts / construction / cost estimate	180.00	
35	Sehgal, Chander	Quality	243.00	400
36	Tarbox, Glenn	Quality	300.00	
37	Trouille, Bruno	Economics and pro forma	208.00	
38	Wantland, Gary	Geotechnical	238.00	
39	Wiseman, Andrea	Health and safety	105.00	
40	Young, John	Geotechnical (Lead)	230.00	

Note 1 – subcontractor: Quanta Technology

Note 2 – subcontractor: Enventure Note 3 – subcontractor: LGL Limited

Note 4 – subcontractor: Energy Cable Consultants

Note 5 – subcontractor: BBA Engineering

# 3.0 Eligible Expenditures

Company approved travel expenses will be reimbursed at actual cost as supported by approved travel authorization, expense claim and receipts as appropriate. All travel shall be in accordance with Lower Churchill Project - Standards for Business Travel, and associated corporate policies, as revised.

Domestic travel per diems (including HST/GST) at time of Agreement execution are as follows. The incidental component of the per diem is only reimbursable when an overnight stay is required.

Item	Island of Newfoundland	Labrador and Other Domestic
Breakfast	12.00	13.00
Lunch	16.00	17.00
Dinner	24.00	25.00
Incidentals	8.00	8.00
Total	60.00	63.00

Per diems for international travel will be in accordance with Canadian Federal Treasury Board Guidelines for the relevant city / country.

#### 4.0 Escalation

Rates are subject to change once per 12-month period after the first anniversary of the agreement by a factor not to exceed the "All Items" Consumer Price Index (CPI) for Newfoundland and Labrador as published by Statistics Canada.

# 5.0 Invoicing

Invoices shall be submitted on a monthly basis in a format agreed by Company and shall be accompanied by relevant supporting documentation (approved timesheets, receipts, etc.). Invoices shall bear this Agreement number.

Invoices will be submitted to:

Nalcor Energy – Lower Churchill Project 500 Columbus Drive P. O. Box 12800 St. John's, NL A1B 0C9

Attention: Accounts Payable

**APPENDIX C** 

**KEY PERSONNEL** 

#### APPENDIX C - KEY PERSONNEL

In accordance with Clause 5.0 of the Agreement, Contractor shall not replace the personnel identified in Appendix B without Company's prior written consent. Such individuals involve the following subcontractors:

Energy Cable Consultants Enventure LGL Limited Quanta Technology

Of those individuals, the following are hereby identified as key personnel who will provide required leadership and oversight:

Individual	Position or Function	Home Base
Nik Argirov	Principal In Charge	Vancouver
Gerry Germain	Contracts / construction / cost estimate	St. John's
Rey Hokensen	Project Manager	Seattle
Derrick Penman	Civil / Structural and Deputy Project Manager	Niagara-on-the-Lake, Ontario

#### **APPENDIX D**

**NEWFOUNDLAND AND LABRADOR BENEFITS REPORTING** 

#### APPENDIX D - NEWFOUNDLAND AND LABRADOR BENEFITS REPORTING

# 1.0 Project Objectives and Principles

Company has negotiated an Impacts and Benefits Agreement (IBA) with the Innu Nation and it will be necessary for Contractor to fulfill the obligations contained within the IBA. Company has also developed a Benefits Strategy with the Province of Newfoundland and Labrador and commitments made in that strategy will become obligations of Contractor as well, including monitoring and reporting of benefits. This document can be found at the following site <a href="https://www.nr.gov.nl.ca/nr/energy/index.html">www.nr.gov.nl.ca/nr/energy/index.html</a>.

The Project is committed to supporting the accrual of benefits for the people of Newfoundland and Labrador, while executing the Project on an economic basis adhering to competitive business practices. Contractor shall work to promote opportunities in Newfoundland and Labrador while maintaining the economic viability of the Project through application of Best Value in the acquisition of goods and services. Best Value is defined as a blend of total cost, quality, commitment to safety, technical suitability, credit worthiness, delivery and continuity of supply and services, where total cost is comprised of initial purchase price plus operation and maintenance costs. Within this framework, Contractor shall, with respect to Services and Work being performed for the Project:

- (a) provide suppliers and contractors in Newfoundland and Labrador with full and fair opportunity to participate on a competitive basis in the supply of goods and services;
- (b) provide suppliers and contractors in Newfoundland and Labrador with full and fair opportunity to participate on a competitive basis in the supply of goods and services;
- (c) become familiar with Newfoundland and Labrador supplier capabilities;
- (d) make the tendering and request for proposal processes, names and locations of key procurement personnel available to potential Newfoundland and Labrador suppliers and contractors where appropriate;
- (e) require benefits information as part of the tendering and request for proposal processes in sufficient detail to assess the benefits to be derived from a proposal or tender, including requiring bidders to complete a benefits questionnaire as part of that process.

### 2.0 Reporting

Company will be required to monitor and report on certain project activities relating to employment and procurement relating to the Lower Churchill Project. To assist in this effort, Contractor will be required to submit data reports on a monthly basis regarding employment and expenditures.

## 2.1 Employment Benefits Reporting

Employment data is required for direct labour associated with the contract. It does not include labour associated with procured or manufactured items. Information on each person directly assigned to the contract must be entered into Table 1 at point of hire/assignment; sample data is included:

Table 1 - Point of Hire/Assignment Employee Data

Employee ID or Name	Start Date	End Date	Aboriginal Affiliation	Gender	Disability (self- identified)	Residency	Town (if NL)
MF-001	1-Mar-11	7-May-11	Inuit	М	No	Newfoundland and Labrador	Nain
MF-002	7-Apr-11		Metis	F	No	Other Canada	NA
MF-003	7-Apr-11		NA	М	Yes	Nova Scotia	Halifax
etc						8 000.000000	

The following information in Table 2 regarding employment must be collected on a monthly basis for each person directly assigned to the project; sample data is included:

Table 2 - Recurring Employment Data

Employee ID or Name	Period Start	Period End	Hours	Location of Work	Contractor	Project	Work Type	Position
MF-001	15-Apr-11	29-Apr-11	80	MFS	JJ's Contracting	Muskrat Falls	Construction and Assembly	Truck driver
MF-002	15-Apr-11	29-Apr-11	60	MFS	IJ's Contracting	Muskrat Falls	Construction and Assembly	Form setter
etc.			econ const					

#### 2.2 Expenditure Data

Expenditure data is tracked in conjunction with invoicing and includes the completion of three tables. Table 3 is completed upon award of contract or subcontract; sample data is included:

#### Table 3 – Contractor Profile

LCP-PT-MD-0000-SC-PR-0003-01 rev B1

Contractor #	Contractor Name	Head Office Location	Aboriginal Affiliation	Industry
CON001	JJ's Contracting	Nain, NL	NG	General contracting

Tables 4 and 5 track expenditures on an ongoing basis and must be completed in conjunction with each invoice submitted; sample data is included:

Table 4 – Invoice Detail by Cost Type

Contractor	Amount Invoiced	Start Date	End Date	Labour	Services	Other
JJ's Contracting	\$100,000	Apr 1,2011	May 5, 2011	50,000	20,000	30,000

Table 5 - Invoice Detail by Location of Expenditure

Cost Type	% Labrador	% Newfoundland	% Nova Scotia	% Other Canada	% International	Total
Labour	25%	45%	0%	10%	20%	100%
Services	10%	30%	15%	35%	10%	100%
Other	15%	15%	10%	20%	40%	100%

Company will supply templates and coding for Newfoundland and Labrador Benefits reporting. Alternately, Contractor shall utilize the following tables attached to this Appendix D:

Attachment A - Employment Table Attachment B - Expenditure Table

#### 3.0 Contractor's Estimates

Estimated benefits per Contractor's proposal and subsequent clarifications can be summarized as follows and are presented for reference purposes only; actual results will be based on Client's requirements, and Contractor's best efforts to provide the requested services in the most economical manner.

#### 3.1 Independent Engineer

Phase 1 = 3,848 hours

Component.	NL	Other Canada	Foreign
Labour	6%	33%	61%
Other	25%	30%	45%

Phase 2 = 24,906 hours

Component	NL	Other Canada	Foreign
Labour	0%	61%	39%
Other	23%	43%	34%

	Phas	se 1	Phase 2		
Category	Hours	%	Hours	%	
Newfoundland	242	6%	0	0%	
Canada	1,271	33%	15,154	61%	
Non-Canada	2,335	61%	9,752	39%	
Total	3,848	100%	24,906	100%	

# 3.2 Operating and Maintenance

Component	NL	Other Canada	Foreign
Labour	0	32%	68%
Other	48%	18%	34%

Category	Hours	%
Newfoundland	0	0%
Canada	2,488	32%
Non-Canada	5,292	68%
Total	7,780	100%

# **Attachment A - Employment Table**

Contractor shall provide, where applicable, the total estimated number of persons and the corresponding estimated number of person-hours anticipated to be utilized in completing the Work, categorized as follows:

<b>Contractors Name:</b>		

<b>Employment Category</b>	Newfoundland and Labrador		Other Canada		Foreign		Total	
	# of Persons	# of Person Hours	# of Persons	# of Person Hours	# of Persons	# of Person Hours	# of Persons	# of Person Hours
Management								
Engineering								
<b>Procurement and Contracting</b>								
Marine								
Other								

Note: If the occupation categories are not appropriate, Contractor may add categories accordingly.

# **Attachment B - Expenditure Table**

Component	Newfoundland and Labrador %	Other Cdn.%	Foreign %	Total %
Materials and Equipment				
Direct Labour				
Services	2 - 2 - X			
Overhead and Profit				
Other				
Total				

#### **APPENDIX E**

**CONTRACTOR REQUIREMENTS – HEALTH, SAFETY, AND ENVIRONMENT** 

### APPENIDX E - CONTRACTOR REQUIREMENTS – HEALTH, SAFETY, AND ENVIRONMENT

#### 1.0 PURPOSE

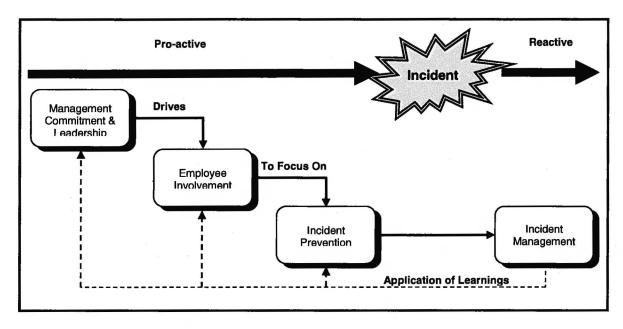
- 1) Establishes Company's requirements for Contractor to implement a systematic approach to health and safety management on the Project.
- Provides Contractor with Company's minimum requirements and expectations related to Contractor's implementation of a systematic approach to health and safety management on the Project.

#### 2.0 OBJECTIVES

#### 2.1 Expectations

- A. Company maintains a management system that integrates safety, health of personnel, asset integrity, security, the impact of operations on the environment, and the quality of work with other critically important aspects of Company's business.
- B. Company's health and safety management approach has a foundation rooted in a proactive culture focused on preventative measures, while having the ability to respond to incidents should they occur. In the simplest of terms, Company believes that management commitment and leadership drive worker involvement to focus on incident prevention processes. In the event that an incident does occur, the learnings shall be applied to continuously improve. Figure 1 illustrates this concept. Company requires Contractor and subcontractors to adopt a similar systematic approach to health and safety management. This systematic approach is predicated upon:
  - Management involvement, leadership, and commitment;
  - Getting line supervisors and workers actively involved in health and safety management;
  - Significant safety and technical resources to support Contractor's health safety management plan and site health and safety plans for the Project; and
  - Dedication and persistence.

#### Figure 1 – Company's fundamental approach to safety management



- B. Company is committed to undertake its business in such a way as to minimize the risks of injury or ill health to people and damage to property or the environment. Company believes sound health and safety performance is fundamental to successful business performance. It is therefore Company's requirement and expectation that everyone associated with the Company shall play their part in the implementation of its occupational health and safety management strategy, performing at the highest possible levels, and foster continuous improvement in the areas of health and safety. Company believes that achieving its safety commitment of "Zero Harm Nobody Gets Hurt" requires the participation of Contractors and sub-contractors and is only attainable from proactive health and safety management by Contractor at the work-face level.
- C. Company is committed to providing a safe and healthy workplace for its employees, Contractor personnel, sub-contractors and the general public. Safety is Company's core value. Company is committed to "Zero Harm Nobody Gets Hurt" and believes this is both achievable and sustainable, while each individual Project team member has a personal responsibility for safety. These commitments are reflected in Company's internal responsibility system depicted in Figure 2.

Figure 2 - Company's Internal Responsibility System



- D. Company's Health and Safety Policy (Attachment 1) reflects it's commitment to safety. Contractor shall subscribe to this commitment throughout all phases of work and relentlessly pursue an objective of an injury and illness free workplace by:
  - Not compromising their focus on safety to achieve other business objectives;
  - Actively caring for Contractor's workers and the public;
  - · Taking personal responsibility for safety; and
  - Promoting and recognizing safe behaviour exhibited by workers.
- E. Company's Environmental Policy and Guiding Principles (Attachment 2) reflects it's commitment to the environment. Contractor shall subscribe to this commitment throughout all phases of work.

#### 2.2 Health and Safety Management Systems

A. Contractor is responsible for maintaining a safe working environment at all times, at all worksites, whether of a temporary or permanent nature. To ensure work performed by Contractor meets Company's expectations, Contractor shall have an effectively implemented health and safety management system which addresses specific requirements for instruction, supervision and resources

- pertaining to permanent, temporary, subcontractor personnel, other contractors or Company personnel.
- B. Contractor is required to demonstrate its ability effectively manage safety on the Project such that Company's commitment of "Zero Harm Nobody Gets Hurt" is achieved.

# 2.3 Overview of Company, Contractor and Sub-contractor Roles

- A. Figure 3 describes the health and safety management relationships between Company, Contractor, and subcontractors. Contractor is responsible for Project level health and safety management of the Work, while Contractor shall be responsible for health and safety management at the Project's Work locations and the site, including oversight of health and safety management activities of both Contractors and sub-contractors.
- B. Company shall influence, monitor, and coach Contractor at Company's sole discretion to leverage Company's health and safety management expertise and to ensure that Contractor has the guidance necessary to position them for success.
- C. Company reserves the right to supplement the health and safety management effort of Contractor, and to influence, monitor, and coach Contractor's Personnel at Company's sole discretion. Contractor shall work with Company in this capacity and shall support Company's desire to positively influence health and safety management.
- D. Company's role in health and safety management in no way relieves Contractor, Contractors, or sub-contractors of their health and safety management responsibilities.

Figure 3 – Health and safety management roles and responsibilities

# Nalcor Energy – Lower Churchill Project

- Communicates and demonstrates Zero Harm Nobody Gets Hurt commitment
- Establishes Project-wide OHS Management System and strategic Management Plan
- Establishes expectations of Contractors through Coordination Procedures
- Reviews and approves Contractor's OHSMS, OHS Management Plan and Site OHS
  Plans
- Chairs Project-level OHS Steering Committee
- Monitors performance and coaches Contractor and its sub-contractors to achieve desired outcomes

# **Contractors**

- Responsible for scope-level OHS management of work
- Develops a Project OHS Management Plan based upon its Company OHSMS.
- Develops Site-specific OHS Plan(s) for all work sites
- Establishes the necessary Plan enablers (people, processes and tools)
- Selects sub-contractors and suppliers who are able to execute their work scope safely
- Demonstrates Zero Harm Nobody Gets Hurt commitment
- Reviews and approves sub-contractor's site OHS management plans
- Charters and chairs site OHS steering committee
- Monitors performance and coaches sub-contractor to achieve desired outcomes



# **Sub-contractors**

- Develops a Project OHS Management Plan based upon its Company OHSMS.
- Develops Site-specific OHS Plan(s) for its work site
- Uses its people, processes and tools to manage work-face safety
- Focuses on Task-based hazard management and worker competency
- Participates in site OHS steering committees
- Proactively engage the worker to promote a Zero Harm Nobody Gets Hurt mindset

# 3.0 CONTRACTOR DUTIES

Without limitation to the full implementation of the health and safety management system, Contractor shall:

- Require all Contractor's and subcontractor's personnel to wear personal protective equipment (PPE) and clothing suitable for existing work as applicable to industry/regulatory standards.
- b) Provide specific instruction to personnel on their responsibilities for safe work during normal and emergency operations, including explanation of hazards and associated protective measures, procedures and emergency response measures.

- c) Ensure that all personnel, including subcontractors' personnel, regardless of prior experience, demonstrates competency to Company in his/her job. Contractor supervisor will also observe new personnel's work performance until Company is satisfied that the personnel are competent to fill the position in a safe and effective manner.
- d) Instruct personnel on (written) work procedures, safe practices, and where applicable, Contractor's safety rules and standards, emergency plans and duties and applicable regulations.
- e) Conduct scheduled and impromptu meetings of the personnel, including any subcontractor's personnel, in which the possible hazards, problems of the job, and related safe practices are emphasized and discussed.
- f) Practice good housekeeping standards.
- g) Provide general safety education through training, safety meetings, Company publications, and other educational media.
- h) Provide all reasonable means to control and prevent fires and explosions, injury to personnel and damage to equipment and property.
- i) When and where applicable, comply with governing confined space entry procedure.
- j) When and where applicable, comply with governing lock out/tag out procedure for all work on equipment, which may inadvertently operate during installation, repair or maintenance.
- k) Institute a pre-work inspection program where prior to commencement of Work, Contractor shall inspect and perform work analysis to ascertain whether any health or safety hazards exist. Contractor will correct identified hazards before commencement of Work or will take steps to prevent personnel exposure to the hazard. Contractor shall document this inspection and hazard analysis process and maintain a copy of the document on file.
- Institute a program to ensure Contractor's personnel are fully trained and currently qualified for their jobs in accordance with regulatory and industry standards and as otherwise specified in this Agreement. Records of certification and training shall be maintained for each person.
- m) All lifting and rigging equipment shall be fully certified with suitable inspection

procedures in place. All personnel involved in lifting/rigging activities shall be suitably trained and certified. Contractor shall ensure that all lifting gear is inspected by a 3<sup>rd</sup> party inspection lifting/rigging company on a yearly basis.

Contractor shall not cause, permit, or tolerate a hazardous, unsafe, unhealthy or environmentally unsound condition or activity over which it has control, to exist or be conducted in the work place.

Contractor shall provide notification to Company within twenty-four (24) hours of all incidents (Lost Time Injuries, Restricted Work Cases, Medical Aids, Property Damages, Environmental Exceedances, high potential near misses). Follow up incident investigation reports shall be submitted to Company within fourteen (14) working days after the occurrence. Contractor shall also provide Company with copies of all reports or other documents filed or provided by Contractor's insurers and regulatory authorities in connection with such accidents and incidents.

The use, possession, distribution or sale of alcohol, illegal drugs or drug-related paraphernalia, firearms, explosives, weapons or other dangerous substances or articles is not permitted in the work place. Contractor shall ensure that Contractor's Personnel who are engaged in the performance of the Work, are familiar with, and comply with, governing drug and alcohol policy. Company may, if it has reasonable cause to believe that a Contractor's Personnel is under the influence of alcohol or drugs, require such Personnel be tested for use under Contractor's own alcohol and drug policy or require Personnel to be removed from the Work place and denied further access.

Contractor shall place the highest priority on safety and health while performing the Services. Contractor is solely responsible for providing and maintaining a safe working environment for Contractor's agents, employees, subcontractors, the public, Company, and other third parties involved in providing the Services.

Contractor shall not permit nor tolerate an unsafe or unhealthy condition or activity over which it has control. Contractor shall immediately inform Company of any unsafe or unhealthy condition or work practice of which it becomes aware but over which it has no authority to correct.

# Contractor shall:

- Perform all Services in a responsible manner;
- Adhere to Company's objective of performing its activities in a way that protects the workers from injuries and occupational illnesses;
- Be committed to identifying, reducing and, if possible, eliminating the risk of injury to the worker;

- Design and maintain facilities, establish management systems, provide training, and conduct operations in a manner that safeguards workers and property;
- Respond quickly, effectively, and with care to emergencies or accidents resulting from its operations, co-operating with authorized government agencies;
- Comply with all applicable Laws and regulations and apply responsible Standards where Laws and regulations do not exist; and
- Undertake appropriate reviews and evaluations of its operations to measure progress and to ensure compliance with applicable safety policies, Laws, and regulations.

For those sites where Company representatives shall be required to perform onsite activities, Contractor shall, prior to commencement of the Work:

- Provide Company in writing with all existing or potential hazards to which Company Representatives may be exposed to in performing their onsite activities; and
- Take the necessary actions to ensure that the Company Representatives can safely perform their onsite activities -- the level of safety deemed acceptable is at the sole discretion of Company and shall be defined as those industry and governmental Standards applicable to similar Work scope performed in Canada.

# 4.0 COMPANY STEWARDSHIP

Company categorizes jobsites per Table 4 below. Company requires an appropriate stewardship approach for each nominated site as detailed below. Contractor shall ensure that its representatives and sub-contractors clearly understand the expectations of Company for each.

Table 4- Stewardship approach selection guidelines

Level	Deciding Principals	Stewardship Approach
1	<ul> <li>A. Activity performed on Company or Contractor property or right-ofway, or</li> <li>B. Mobile resource specifically selected by Contractor for essentially 100% dedication to a project activity</li> </ul>	Control and oversee implementation of location specific health and safety management plan with support from Company, on Company property or right-of-way. Measure and report safety metrics to Company.
2	<ul> <li>A. 3<sup>rd</sup> party locations with sufficient Contractor resources to influence health and safety management, or</li> <li>B. 3<sup>rd</sup> party locations involving scenarios or activities which have the potential to adversely affect cost, schedule, public image, or safety of Contractor or Company Representatives, or</li> </ul>	Influence with Contractor presence and oversee implementation of a location-specific health and safety management plan. Measure and report safety metrics to Company.
	C. 3 <sup>rd</sup> party with whom Contractor or Company intends to develop a long term business relationship, or 3 <sup>rd</sup> party sites where Contractor utilizes essentially 100% of a site's capacity or essentially 100% of a segregated portion of the overall site.	
3	<ul> <li>A. Subcontractor or Supplier activities not included in Level 1 or 2, or</li> <li>B. Engineered work packages not included in Level 1 or 2</li> </ul>	Influence health and safety when feasible and as requested by Contractors / sub-contractors.  Measure and report safety metrics to Company for utilization in establishing future business relationships.

For purposes of this Agreement, the following stewardship levels (and associated site-specific health and safety management plan requirements) shall apply:

Location	Level
Field	1
Engineering office(s)	2
Manufacturing sites	3

# 5.0 SPECIFIC REQUIREMENTS FOR PROJECT HEALTH AND SAFETY MANAGEMENT PLAN

# 5.1 General

Contractor's Project Health and Safety Management Plan shall:

A. Identify the means that Contractor's site team shall communicate safety expectations to onsite Project Personnel.

For level 1 sites, Contractor, shall facilitate kickoff meetings for site management, site supervisors, and the workers to:

- Communicate safety policy, expectations, objectives, and desired results;
- Promote alignment, teamwork, and ownership; and
- Provide a high level rollout of the site Health and Safety Plan and the associated safety processes.
- B. Identify processes that position Contractor, the site supervisors, and the workers to recognize, and then eliminate or control potential site hazards.

Contractor shall perform (or provide) hazard assessments for each generic task (e.g. river operations, formwork erection, brush cutting). Such assessments shall:

- Identify the steps associated with performing a task;
- Identify the hazards associated with each step;
- Identify the means that the hazards shall be eliminated or minimized;
- Be developed prior to commencement of the overall work scope; and
- Be developed by knowledgeable and experienced personnel.

Contractor shall identify common safety rules, procedures, and safe work practices to be utilized.

Contractor shall identify the statutory regulations that are applicable to the Work.

5.2 Selection of Sub-contractors and Suppliers

- A. Contractor's Project Health and Safety Management Plan shall identify Contractor's selection criteria for selecting sub-contractors and suppliers to perform the Work. The selection of sub-contractors and suppliers who are able to execute their Work scope in a safe manner is a key health and safety management expectation. Contractor shall address safety performance sub-contractors and suppliers by utilizing a structured selection process that addresses the following considerations:
  - Adequacy of sub-contractors' / supplier health and safety management systems, plans, processes, and procedures;
  - Maturity of sub-contractors' / supplier's health and safety management culture;
  - Recent experience with sub-contractors' / supplier;
  - Similar work scope experience;
  - Historical safety performance (including recent trends);
  - Willingness of sub-contractors'/ supplier to make system and cultural improvements prior to the commencement of the Work;
  - Sub-contractors' / supplier's ability and willingness to adequately address hazards identified in the Project-level hazard and risk management processes;
  - Sub-contractors' / supplier's ability and willingness to provide resources to the site Health and Safety Management Plan development and implementation process; and
  - Sub-contractors' / supplier's ability and willingness to execute the Work scope in a safe manner while working within the parameters of this Coordination Procedures, applicable statutory regulations, and relevant Project agreements.
- B. Contractor must look beyond historical safety performance (trailing safety performance measures) when selecting potential sub-contractors and suppliers for the Work. In many cases, safety performance comparisons between sub-contractors and suppliers are not equivalent due to the following considerations:
  - Variable cultural, social, and regulatory philosophies/drivers;
  - Variable injury classification definitions;
  - Variable policies/drivers for case management and injury/illness classification; and
  - Failure to follow generally accepted record keeping guidelines.
- C. For those situations where sub-contractors and suppliers with inadequate safety performance must be utilized, Contractor shall provide the appropriate level of resources and a written plan to improve such sub-contractors and suppliers

safety performance. Company reserves the right to review and comment on the plan, and where deficiencies are identified to request alternative actions be implemented.

#### 5.3 **Safety Training**

- A. Contractor's Project Health and Safety Management Plan shall identify required Project level safety training for Contractor site team. Contractor shall address the following considerations for Project level safety training:
  - Evaluation of training needs, including regulatory requirements and Newfoundland and Labrador content issues;
  - Development of an implementation plan, including required resources and timing;
  - Documentation of training;
  - Periodic assessments of effectiveness; and
  - Refresher training.

#### **Incident Management Requirements** 5.4

- Contractor's Project Health and Safety Management Plan shall identify how A. Contractor shall manage incidents that occur.
- B. Contractor is responsible for the following:
  - Verbal and written notification to Company by the next calendar day and to local authorities as required;
  - Follow up incident investigation reports shall be submitted to Company within fourteen (14) working days after the occurrence.
  - Verifying that the injured party receives adequate care and that the appropriate level of case management has been performed by Contractor's site teams;
  - Verifying that injuries are classified according to the Company guidelines and as per appropriate regulations;
  - Verifying that the incident has been fully investigated and that the root cause and contributing factors have been identified and communicated to the appropriate Personnel; and
  - Taking immediate measures to prevent reoccurrence of similar incidents.
  - Sharing incident learnings across Contractor's site teams.

#### 5.5 Other

Each location specific health and safety management plan shall:

B. Identify the means that Contractor's site team shall communicate safety expectations to onsite Project Personnel.

For level 1 sites, Contractor, shall facilitate kickoff meetings for site management, site supervisors, and the workers to:

- Communicate safety policy, expectations, objectives, and desired results;
- Promote alignment, teamwork, and ownership; and
- Provide a high level rollout of the site Health and Safety Plan and the associated safety processes.

# 5.6 Other System Requirements

Contractor's Project Health and Safety Management Plan shall identify how:

- A. Contractor shall comply with prevailing strategic emergency response at the Project level.
- B. Contractor shall manage Project level changes that could potentially affect health safety at the site.
- C. Contractor shall identify the requirement for each site team performing Work on Company property or right-of-way (level 1 Stewardship) to utilize Company's Substance Abuse Prevention Policy (ON HOLD).

# 6.0 REPORTING

- A. Contractor shall provide Company with a safety report each month no later than five (5) calendar days after the close of the month. The safety report shall include the following performance statistics at minimum:
  - Person hours worked
  - Lost time injuries
  - Recordable injuries
  - Restricted duty injuries
  - Medical aids
  - First aid cases
  - Occupational illnesses

- High potential near misses
- Fatalities
- Property Damage
- Environmental Incidents
- Near Miss Incidents
- Equipment Damage

B. Such measures shall be calculated per 200,000 work hours.

# 7.0 COMPLIANCE

Company shall have the right to perform surveillance to verify the performance of Contractor and Contractor's subcontractors to ensure compliance with relevant requirements in all areas during the execution of the Work. HSE assessments/audits may also be performed by Company during the course of the Work.

# 8.0 COMPANY'S VERIFICATION AND ASSESSMENT / AUDIT RIGHTS

Company shall have the right to perform surveillance to verify the performance of Contractor and Contractor's subcontractors to ensure compliance with relevant requirements in all areas during the execution of the Work. HSE assessments/audits may also be performed by Company during the course of the Work.



# Nalcor Energy Occupational Health and Safety Policy

The safety of our employees, contractors, visitors and the public is our first and most important priority. Our goal is a workplace where nobody gets hurt -- zero harm -- and a working environment where each and every employee is always concerned for their own safety and the safety of others. In support of this goal, Nalcor Energy and its employees are committed to the following guiding principles

- 1) Employees will govern their actions in accordance with Nalcor Energy's Internal Responsibility System for safety. This includes adherence to the principles of employee and role related responsibilities for their personal safety and the safety of their co-workers, contractors, visitors, and members of the public.
- 2) Nalcor Energy shall establish and maintain an Occupational Health & Safety Management System (HSMS) which:
  - a. meets or exceeds legislated requirements and is compliance with accepted industry standards and practice; and
  - b. documents health and safety objectives for Nalcor Energy; and
  - c. contains a mechanism for performance measurement and continuous improvement; and
  - d. facilitates both the formal and informal involvement of employees in the development, maintenance, and improvement of occupational health and safety within the organization.

President and CEO Nalcor Energy

Rev: 02 June 8, 2009

# **Environmental Policy and Guiding Principles**



All Nalcor Energy companies will help sustain a diverse and healthy environment for present and future Newfoundlanders and Labradorians by maintaining a high standard of environmental responsibility and performance through the implementation of a comprehensive environmental management system.

The environmental principles that follow guide Nalcor Energy companies' environmental actions and decision-making:

# **Prevention of Pollution**

- implement reasonable actions for prevention of pollution of air, water, and soil and minimize the impact of any pollution which is accidental or unavoidable;
- use the Province's natural resources in a wise and efficient manner;
- use energy as efficiently as possible during the generation, transmission, and distribution of electricity, and the operation of its facilities, and promote efficient use of electricity by stakeholders;
- maintain an adequate level of emergency preparedness in order to respond quickly and effectively to environmental emergencies; and
- recover, reduce, reuse and recycle waste materials whenever feasible.

# **Improve Continually**

- audit facilities to assess potential environmental risks and to identify opportunities for continual improvement of environmental performance;
- establish environmental objectives and targets, and monitor environmental performance;
- integrate environmental considerations into decision-making processes at all levels; and
- empower employees to be responsible for the environmental aspects of their jobs and ensure that they have the skills and knowledge necessary to conduct their work in an environmentally responsible manner.

# **Comply with Legislation**

- comply with all applicable environmental laws and regulations, and participate in the Canadian Electricity Association's Sustainable Electricity Program;
- periodically report to the Board of Directors, Leadership Team, employees, government agencies, and the general public on environmental performance, commitments and activities;
- monitor compliance with environmental laws and regulations, and quantify predicted environmental impacts of selected activities on the environment; and
- respect the cultural heritage of the people of the Province and strive to minimize the potential impact of Corporate activities on heritage resources.

Approved by:

Date:

February 3, 2010

nalcor

# **APPENDIX F**

**CONTRACTOR REQUIREMENTS – QUALITY MANAGEMENT** 

# **APPENIDX F - CONTRACTOR REQUIREMENTS - QUALITY MANAGEMENT**

# **Workscope Quality Plan**

To ensure Quality throughout the work, including work performed by any subcontractors (if applicable) and to help effectively manage the activities of the requested services, within forty five (45) days of the effective Date of the Agreement, Contractor shall submit a Workscope Quality Plan which identifies the activities from Effective Date of the Agreement through to provision of the service.

The Workscope Quality Plan shall be subject to review and approval by Company. Any modifications to the Workscope Quality Plan, as the work progresses, shall be communicated to and agreed with Company.

As a minimum the Workscope Quality Plan shall address the following:

- Overall scope, definition and approach to perform the requested services
- Organization Chart, including resumes of participants proposed for the services, registered in professional engineering associations throughout Canada and United States
- List of policies and procedures (Review, Verification, Validation, etc.) to be used to perform the requested service
- Schedule
- Identification of deliverables
- Communication and Progress Reporting Requirements
- Documentation Requirements
- Preliminary Table of Contents of the final report
- List of any work to be sub-contracted out (if applicable)

# **Reports**

Contractor shall provide a quality report on an as-required basis which shall include but not limited to the following:

- a) Progress against Workscope Quality Plan;
- b) Details on internal assessments or internal quality audits conducted during the month. Contractor shall include details on the area(s) audited and the number of noncompliance/corrective actions raised;
- c) Details on any audits conducted by others on Contractor, subject to permission from audit sponsor;

- d) Summary of all Contractor non-conformance/corrective actions raised and closed during the month;
- e) Access to view management reviews of the Contractor's quality management system conducted during the month, subject to removal of proprietary information;
- f) Details of and changes of personnel that may affect the delivery of services to Company;
- g) Details of any quality improvement initiatives undertaken during the period or suggestions on how the working relationship between Company and Contractor may be improved;

# **APPENDIX G**

# **COORDINATION PROCEDURES**

# **APPENDIX G - COORDINATION PROCEDURE**

# 1.0 INTRODUCTION

This Coordination Procedure is intended to assist Contractor and Company in the administration and management of the Agreement.

# 2.0 COMPANY REPRESENTATIVE

Company's Representative with the responsibility for receiving and issuing any instructions, decisions, notices, authorizations and acknowledgements under this Agreement shall be:

Name:

Lance Clarke

Position:

**Commercial Manager** 

Address:

500 Columbus Drive, St. John's, NL A1B 0C9

Telephone:

709-737-1245

Facsimile:

709-737-1901

E-mail:

lanceclarke@nalcorenergy.com

Copies of all documentation referenced above are to be forwarded to:

Name:

Ross Beckwith

Position:

**Commercial Coordinator** 

Address:

500 Columbus Drive, St. John's, NL A1B 0C9

Telephone:

709-570-5984

Facsimile:

709-737-1985

E-mail:

rossbeckwith @nalcorener gy.com

Company Representatives shall have the responsibility for administering, monitoring, reviewing and coordinating all aspects of the Agreement including the issuing of instructions, certificates and orders.

Company Representatives may delegate any of his or her responsibilities to any nominated deputy. Notifications, information, authorizations, acknowledgements and decisions from any such nominated deputy shall be as if from Company's Representative.

# 3.0 CONTRACTOR'S ORGANIZATION

# 3.1 Contractor's Representatives

Contractor shall appoint a full time Project Manager, as "Contractor's Representative" for the Work, who shall have full authority to receive instructions and administer the Agreement for and on behalf of Contractor. The Person appointed is:

# **Primary:**

Name:

Rey Hokenson

Position:

**Project Manager** 

Address:

2353 130<sup>th</sup> Avenue NE

Belleville, Washington

USA 98005-1758

Telephone:

425-602-3523

Facsimile:

425-602-4020

E-mail:

reynold.a.hokenson@mwhglobal.com

Contractor's Representative shall have the responsibility for receiving, acknowledging, countersigning and returning any instructions, decisions, notices, authorizations and acknowledgements to Contractor under this Agreement. The role shall also be responsible for administering, monitoring, reviewing and coordinating all aspects of the Work on behalf of Contractor.

Contractor's Representative shall have the authority to commit Contractor to any course of action within the rights and obligations of Contractor under the provisions of the Agreement and shall notify Company of all information and decisions of Contractor under the provisions of the Agreement. All notifications, information and decisions from Contractor's Representative shall be as if from Contractor and shall commit Contractor.

# 3.2 Contractor's Organization

Contractor shall submit for Company approval, its project organization charts for the management, control and execution of the Work which will outline all positions required to execute the Work, position titles and functional and project reporting lines of each position.

Contractors' organization shall be designed to achieve Company's overall project drivers and shall reflect any unique characteristics of the project or requirements of Company.

Contractor shall provide to Company for approval, detailed position descriptions for positions Company designates as Key Positions. Key Positions are deemed essential for the timely, orderly and successful execution of the Work.

Key positions shall be committed to continue through the Agreement period in order to maintain continuity. The appointment, transfer and replacement of personnel to all key positions shall be subject to Company's prior approval. Key positions shall be assigned on a full time basis to support this Agreement, unless otherwise approved by Company.

# 4.0 COMMUNICATION AND CORRESPONDENCE

All instructions given to Contractor within the terms of this Agreement shall be given in writing by the Company Representative; oral instructions shall be confirmed in writing without undue delay. E-mailed or facsimile correspondence shall only be utilized if signed by the appropriate signing authority and followed by a hard copy original if deemed necessary. Written communication of day to day interface activities can be in the form of email communication from Company Representative to Contractor Representative (or visa-versa). All correspondence shall be in English.

Contractor shall maintain a register for all correspondence, which shall be accessible to Company for information. All correspondence shall be dated and include, at a minimum, the Agreement number, Agreement title, subject of the correspondence and a unique correspondence number.

# 5.0 MEETINGS BETWEEN COMPANY AND CONTRACTOR

# 5.1 Agenda

The agenda items for any meeting will be issued to the Parties no less than two (2) business days prior to the meeting. Both Company and Contractor shall ensure, in accordance with their respective responsibilities that reports, reproducible documentation and forward planning information relating to agenda items are issued in sufficient time to allow adequate preparatory study and evaluation. In the event that such information requires more than two (2) Business Days to allow adequate preparatory study and evaluation, the item will not become an agenda item until subsequent to the time required by the Party for adequate preparatory study and evaluation.

The meeting will address only the items covered by the agenda and any other minor topics relevant to the parties and subject concerned.

In those instances where matters of urgency need to be addressed, Company and Contractor will make every effort to address such items at the earliest opportunity.

# 5.2 Meetings

Regular weekly or monthly meetings will be held as recommended by Contractor.

Company may hold other meetings with Contractor as may be otherwise required for the Work and the Agreement. Contractor shall ensure sufficient qualified Personnel are available to attend.

Contractor may request meetings with Company's other contractors but this must be done via Company. All correspondence in relation to such meetings shall be via Company unless otherwise agreed. Unless otherwise approved by Company, no meetings with Contractor and Company's Other Contractors shall take place unless a Company Representative is present.

It shall be the responsibility of Contractor to record minutes of all meetings unless otherwise instructed by Company. The minutes shall be distributed to all attendees, and others designated by the Company Representative, not later than three (3) Business Days succeeding the meeting day.

Contractor shall maintain a separate action log which contains all actions from all meetings.

#### 6.0 **ENGINEERING AND DOCUMENTATION**

#### 6.1 **Contractor Engineering**

Contractor shall prepare the documents which are needed for the adequate description, definition and execution of the Work; all in accordance with appropriate engineering practice. Work that is governed by the association of Professional Engineers and Geoscientists Newfoundland and Labrador (PEGNL) must be completed in accordance with the PEGNL requirements.

The primary units of measurement shall be the International System of Units (SI). All technical documentation supplied by Contractor or its sub-contractors and covered by the Agreement, will become the property of Company.

#### 7.0 **QUALITY MANAGEMENT**

#### 7.1 **Contractor's Quality Management System**

Contractor shall have an effectively implemented quality management system. Recognizing the value of the internationally accepted ISO standards, the system shall, as a minimum, be compliant with the requirements of ISO 9001:2008 - Quality management systems - Requirements.

# 7.2 Workscope Quality Plan

Contractor shall submit a Workscope Quality Plan for review and approval by Company which complies with Appendix F and which identifies the activities from Effective Date of the Agreement through to provision of the service.

# 8.0 HEALTH, SAFETY, ANAD ENVIRONMENTAL

# 8.1 General

Company maintains a management system that integrates safety, health of personnel, asset integrity, the impact of operations on the environment, and the quality of work with other critically important aspects of Company's business.

# 8.2 Contractor's HSE Management System

Contractor is responsible for maintaining a safe working environment at all times, at all worksites, whether of a temporary or permanent nature. To ensure work performed by Contractor meets Company's expectations, Contractor shall have an effectively implemented HSES management system which addresses specific requirements for instruction, supervision and resources pertaining to permanent, temporary, subcontractor personnel, other contractors or Company personnel.

# 8.3 HSE Plan

Contractor shall submit a comprehensive Health, Safety, and Environment (HSE) plan for review and approval by Company which complies with Appendix E.

# RELIANCE AGREEMENT

THIS AGREEMENT dated as of the 4<sup>th</sup> day of June, 2013.

# BETWEEN:

NALCOR ENERGY (the "Company")

- and -

MWH CANADA, INC. (the "Contractor")

- and -

HER MAJESTY THE QUEEN IN RIGHT OF CANADA, as represented by THE MINISTER OF NATURAL RESOURCES ("Canada")

WHEREAS pursuant to Agreement No. LC-PM-082 dated as of August 27<sup>th</sup>, 2012 (as same may be amended, restated, supplemented or otherwise modified or replaced in accordance with the terms hereof, the "**Contract**"), the Contractor agreed to provide the Company with certain independent engineer, operating and maintenance services in connection with the Lower Churchill River projects as more particularly described therein (the "**Lower Churchill River Projects**");

AND WHEREAS Canada has entered into an agreement dated November 30, 2012 (the "FLG Agreement") with the Company and Emera Inc. which sets forth the key terms and conditions for the federal loan guarantee of the Lower Churchill River Projects;

AND WHEREAS as a condition precedent to the issuance of any guarantee by Canada in respect of the Lower Churchill River Projects, Section 4.9 of the FLG Agreement requires that an independent engineer shall have been appointed to, *inter alia*, permit Canada to complete its due diligence with respect to the Lower Churchill River Projects and to ensure compliance with the terms of the FLG Agreement and all Financing Documents to effect Financial Close (as each of those terms is defined in the FLG Agreement);

AND WHEREAS the Company, the Contractor and Canada (collectively, the "Parties" each a "Party") have agreed to enter into this Agreement to enable Canada to (i) receive and rely upon any reports issued by the Contractor pursuant to the Contract and (ii) permit the Contractor to discuss such reports with Canada, so as to facilitate, in part, the satisfaction of the requirements of Section 3.5(B)(ix) of the FLG Agreement, until such time as the Contract is assigned by the Company to the special purpose vehicle(s) who will own the Lower Churchill River Projects (the "SPVs") at which time this Agreement will be replaced by a more fulsome agreement among, *inter alia*, the SPVs, the Contractor and Canada that will include certain amendments to the Contract as agreed to by Canada and the Company so as to facilitate the satisfaction of the requirements of Section 3.5(B)(ix) and Section 4.9 of the FLG Agreement;

NOW THEREFORE for good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged), each of the Parties hereby represents, covenants and agrees as follows:

- 1. Capitalized terms used in this Agreement and not otherwise defined shall have the meaning given to such terms in the Contract. Any reference to Canada hereunder shall be deemed to include its ministers, employees, contractors, servants, invitees and agents as well as any legal, financial or other professional advisors to it.
- 2. Each of the Company and the Contractor hereby represents and warrants to Canada that the Company has no contractual or other relationship with the Contractor save and except for the contractual relationship between the Company and the Contractor arising pursuant to the Contract.
- 3. Neither the execution and delivery of this Agreement, nor the exercise by any of the Parties of its rights and obligations hereunder will create a partnership, joint venture, principal-and-agent relationship, or any similar relationship between the Parties. In furtherance of the foregoing, each of the Parties hereby confirms that it is not their intention to create any such relationship. The Company hereby agrees to indemnify and save Canada harmless from any costs, charges, expenses, claims, actions, proceedings and any other liabilities whatsoever arising from or in any way related to Canada being held to be in a partnership, joint venture, principal-and-agent relationship, or similar relationship with either of the other Parties by virtue of the execution and delivery of this Agreement or the exercise by Canada of any of its rights hereunder.
- 4. Each of the representations and warranties made by the Contractor in the Contract may be relied upon by Canada as though such representations or warranties were originally made to Canada including, without limitation, the representations and warranties made in Section 4.5 and Section 22.2 regarding the Work and the Warranty Work. To the extent that any representations and warranties made by the Contractor in the Contract are expressed to be valid for any specific time period, Canada shall only be entitled to rely upon such representations and warranties for such period.
- 5. Canada shall have full access to and shall be entitled to receive from either the Company or the Contractor, immediately upon request by Canada, all of the Intellectual Property including, without limitation, all of the records and accounts of costs related to the Work required to be kept and maintained by the Contractor pursuant to Section 12.1 of the Contract. In furtherance of the foregoing, the Contractor agrees to (a) provide Canada with any material reports issued by the Contractor to the Company from time to time, such reports to be addressed to Canada and delivered concurrently with the delivery of such reports to the Company and (b) respond to and generally be available to discuss, from time to time, any questions or inquiries that Canada may have in respect of any such material reports or any of the other Intellectual Property. The Company hereby unconditionally and irrevocably consents to the Contractor and Canada engaging in such discussions.
- 6. The Contractor hereby confirms and agrees that each of the indemnities made by it in favour of the Company pursuant to the Contract are and shall be deemed to have been made in favour of Canada including, without limitation, the indemnities set forth in Section 18 of the Contract. For certainty, the Contractor hereby waives all rights

of legal recourse against Canada to the same extent, and in respect of all of the same matters, which it has waived such rights against the Company pursuant to the Contract. Canada hereby confirms and agrees that any provision of the Contract that in away limits the liability of the Contractor toward the Company, whether such limitation applies in connection with the indemnities set forth in Section 18 of the Contract or in connection with any other matter set forth in the Contract, shall, in the same manner and to the same extent, apply as against Canada with respect to any such liability of the Contractor toward Canada incurred by virtue of this Agreement and the Contract.

- 7. Save and except for assignments to the SPVs, the Company may not assign the Contract to any person without the prior written consent of Canada, which consent may be withheld by Canada in its sole discretion. The Contractor shall not assign the Contract in part or in whole without the prior written consent of Canada, which consent may be withheld by Canada in its sole discretion. Consent by Canada to assign the Contract will not relieve the Contractor of any of its liabilities or obligations under the Contract.
- With respect to Confidential Information, Canada hereby advises each of 8. the Contractor and the Company that it is specifically subject to the following legislation the Access to Information Act (Canada), the Library and Archives of Canada Act (Canada), the Auditor General Act (Canada) and the Privacy Act (Canada), and as such the public has a right of access to Canada's records with respect to the Contract and the Lower Churchill River Projects. To the extent that Canada is required to disclose Confidential Information in order to comply with (i) any of the above-mentioned legislation or any regulation, standard, code, order, directive, (ii) any other rule from any governmental or regulatory body acting thereunder or otherwise with jurisdiction over Canada and its records relating to the Contract and the Lower Churchill River Projects or (iii) any legally binding order of any court with jurisdiction over Canada and its records relating to the Contract and the Lower Churchill River Projects. Canada shall do so in accordance with Section 15.6 of the Contract, Canada shall not be liable for any claims, costs, losses or damages experienced by the Contractor or the Company as a result of Canada's release of information to another party pursuant to (i) the provisions of any of the above-mentioned legislation or any regulation, standard, code, order, directive, (ii) any other rule from any governmental or regulatory body acting thereunder or otherwise with jurisdiction over Canada and its records relating to the Contract and the Lower Churchill River Projects or (iii) any legally binding order of any court with jurisdiction over Canada and its records relating to the Contract and the Lower Churchill River Projects.
- 9. Each of the Parties acknowledges and agrees that neither the execution and delivery of this Agreement nor the exercise by any of the Parties of its rights and obligations hereunder shall constitute an assignment to or assumption by Canada of any of the liabilities or obligations of any Party arising under the Contract including, without limitation, the obligation on the part of the Company to remunerate the Contractor for performing the Work. For certainty any and all costs and expenses incurred by the Contractor pursuant to the Contract or in performance of any of its obligations hereunder shall be for the account of the Company.
- 10. All notices to be delivered to any Party by any other Party shall be delivered to (i) in the case of the Company or the Contractor, to such Party at the address provided for in the Contract and (ii) to Canada at the following address (or such other address as Canada may subsequently notify the other Parties in writing:

National Resources Canada, Renewable and Electrical Energy Division 580 Booth Street, 17<sup>th</sup> Floor, Room B7-3 Ottawa, Ontario K1A 0E4

Attention: Anoop Kapoor, Director

Email: Anoop.Kapoor@NRCan-RNCan.gc.ca

Phone: 613 996-5762 Fax: 613 947-4205

Any notice is effective (i) if personally delivered as described above, on the day of delivery if that day is a business day and it was delivered before 5:00 p.m. Eastern time in the place of receipt and otherwise on the next business day, (ii) if sent by fax, on the day of transmission, if that day is a business day and the fax transmission was made before 5:00 p.m. Eastern time in the place of receipt and otherwise on the next business day, or (iii) if sent by electronic mail, on the day the sender receives confirmation of receipt by return electronic mail from the recipient if that day is a business day and if the sender received confirmation before 5:00 p.m. Eastern time in the place of receipt, and otherwise on the next business day. For the purposes of this Section 10, a business day is any day other than a Saturday, Sunday or statutory holiday in the Provinces of Newfoundland. Nova Scotia and Ontario.

- 11. Each Party, upon receipt of notice by another Party, shall sign (or cause to be signed) all further documents, do (or cause to be done) all further acts, and provide all reasonable assurances as may reasonably be necessary or desirable to give effect to the terms of this Agreement.
- 12. This Agreement enures to the benefit of and binds the Parties and their respective successors, and permitted assigns. This Agreement may not be assigned by either the Company or the Contractor without the prior written consent of Canada in its sole discretion. This Agreement may not be assigned by Canada without the prior written consent of the Company in its sole direction.
- 13. This Agreement may be signed in any number of counterparts, each of which is an original, and all of which taken together constitute one single document. Counterparts may be transmitted by fax or in electronically scanned form. Parties transmitting by fax or electronically shall also deliver the original counterpart to each other Party, but failure to do so does not invalidate this Agreement.
- 14. The laws of the Province of Newfoundland and Labrador and the federal laws of Canada applicable therein, excluding any rule or principle of conflicts of law that may provide otherwise, govern this Agreement.
- 15. The Company is entering into this Agreement, and the Contractor and Canada acknowledge that the Company is entering into this Agreement, solely in its own right and not on behalf of or as agent of Her Majesty the Queen in Right of the Province of Newfoundland and Labrador.
- 16. Immediately and automatically upon the assignment of the Contract by the Company to the SPVs:

- (a) the Company shall be fully and finally released and discharged from all liabilities, obligations, any and all actions, causes of action and covenants, whether expressed or implied, claims or demands for damages, sums due, indemnity, costs (including without limitation legal fees and disbursements), expenses, interest, loss or injury of every nature and kind whatsoever and howsoever arising that the Contractor may have and that arise after such assignment, in any way relating to or under the Contract, and the Contractor acknowledges and agrees that the SPVs shall thereupon be the sole obligors for all such obligations under the Contract in the same manner and to the same extent as if they were the sole obligors and original parties thereto in the place and stead of the Company under the Contract, the whole without any further action, approval, notice or document being taken, obtained, sent or executed by or to any of the parties at any time. For greater certainty, the Company shall continue to be the sole obligor for all such obligations under the Contract that arise prior to such assignment; and
- (b) the Company shall be fully and finally released and discharged from all liabilities, obligations, any and all actions, causes of action and covenants, whether expressed or implied, claims or demands for damages, sums due, indemnity, costs (including without limitation legal fees and disbursements), expenses, interest, loss or injury of every nature and kind whatsoever and howsoever arising that the Contractor or Canada may have and that arise after such assignment, in any way relating to or under this Agreement, and the Contractor and Canada acknowledge and agree that the SPVs shall thereupon be the sole obligors for all such obligations under this Agreement in the same manner and to the same extent as if they were the sole obligors and original parties hereto in the place and stead of the Company under this Agreement, the whole without any further action, approval, notice or document being taken, obtained, sent or executed by or to any of the parties at any time. For greater certainty, the Company shall continue to be the sole obligor for all such obligations under the Agreement that arise prior to such assignment.
- 17. The parties acknowledge and agree that concurrently upon the assignment of the Contract by the Company to the SPVs, Canada, the Contractor and the SPVs shall execute and deliver a reliance agreement in form and substance satisfactory to each one thereof, the whole as described in the fourth preamble paragraph of this Agreement. Concurrently with the execution and delivery of such agreement by Canada, the Contractor and the SPVs, this Agreement shall immediately and automatically terminate.
- 18. The Company hereby waives, and shall cause each of the SPVs to waive, any and all causes of action, current and future, based upon any contractual arrangement resulting in any damages any one thereof might suffer as a result of any work product or advice given by the Contractor to Canada in accordance with the terms and conditions of the Contract and this Agreement.

IN WITNESS WHEREOF each of the Company, the Contractor and Canada has executed this Agreement as of the date first written above.

# Per: James Meaning Title: GM Finance, Cower Churchill Project Per: Name: James & Sturger Title: VP, Finance & CFO

•	Title: GM Fanayice, Lower Church
Per:	Thomas
	Name: Dernick Sturge Title: VP, Finance b
мwн	CANADA, INC.
Per:	
	Name: Title:
Per:	
	Name: Title:
CANA	MAJESTY THE QUEEN IN RIGHT OF ADA, as represented by THE STER OF NATURAL RESOURCES
Per:	
-	Name: Title:
Per:	
	Name: Title:

**IN WITNESS WHEREOF** each of the Company, the Contractor and Canada has executed this Agreement as of the date first written above.

# **NALCOR ENERGY**

Per:	Name	
	Name: Title:	
Per:	Name: Title:	
MWH	CANADA, INC.	
Per:	Name: NIK ARGIROV Title: VP, LH	
Per:	Name: Title:	
HER MAJESTY THE QUEEN IN RIGHT OF CANADA, as represented by THE MINISTER OF NATURAL RESOURCES		
Per:	Name: Title:	
Per:	Name: Title:	

**IN WITNESS WHEREOF** each of the Company, the Contractor and Canada has executed this Agreement as of the date first written above.

**NALCOR ENERGY** 

Per:	Name: Title:			
Per:	Name: Title:			
MWH CANADA, INC.				
Per:	Name: Title:			
Per:	Name: Title:			
HER MAJESTY THE QUEEN IN RIGHT OF CANADA, as represented by THE MINISTER OF NATURAL RESOURCES  Per:   Minister of Natural Resources				
Per:	Name: Jonathan Will Title: Director General, Electricity Resources Branch			
1 GI.	Name: Title:			

# RFP LC-PM-082 – Independent Engineer

# ATTACHMENT 1 – DETAILED SCOPE OF WORK

# A. GENERAL ROLE OF INDEPENDENT ENGINEER

The role of the Independent Engineer ("Independent Engineer") for the Lower Churchill Project ("LCP Project") is to provide independent engineering advice and independent engineering reports.

The LCP Project is comprised of the following three separate but inter-related projects (each a "Project"):

- Muskrat Falls Generation Project;
- Labrador-Island Link Project; and
- Labrador Transmission Assets Project.

The three Projects will be owned by different owners (each an "Owner"). The Muskrat Falls Generation Project and Labrador Transmission Assets Project will each be owned by a separate subsidiary of Nalcor. The Labrador-Island Link Project will be owned by a limited partnership in which the limited partners will be Nalcor and Emera Inc. or their subsidiaries.

The Independent Engineer's client for each Project is not the Owner of that Project but, instead, the lenders, the hedge providers, the federal government as guarantor, the rating agencies, and such other entities as may be involved in providing financing for, or financial guarantees in support of, each of the Projects (initially and collectively "Client"). The rating agencies have been engaged and both the rating agencies and the federal government have already commenced their review of the LCP Project. The lenders, hedge providers and others will be, but have not yet been, engaged.

Given the size, scope and complexity of the LCP Project and the schedule for achieving financial close, the Independent Engineer will initially be retained and paid by the Owner on behalf of the Clients so that the Independent Engineer can familiarize itself with each of the Projects and the LCP Project as a whole, identify the documents and information that will be required for its review, and commence an initial review of the documents and information currently available. Once the lead lenders for each Project are known, the intention is that, provided the Independent Engineer is acceptable to those lenders, the Independent Engineer will be retained separately, either directly or indirectly, by those lenders and by the hedge providers and federal guarantor, as the "Client" for that Project. The Independent Engineer will then take instructions from and report directly to that Client in relation to that Project. The Independent Engineer will execute any assignments, novation instruments or further agreements as may be required by each of the lender Clients to give full effect to that arrangement and, at their discretion, may be required to issue separate, independent reports for each Project and, in

addition, a consolidated report for the entire LCP Project incorporating those independent reports. It is essential that, until the Independent Engineer is retained by the lenders as its Client, the Independent Engineer act at all times as if it is already retained by the lender Clients and does not put itself in a position that will compromise its ability to fully, frankly and impartially provide independent services and advice to them.

The Independent Engineer will copy each Owner with all draft reports and final reports issued by the Independent Engineer to Clients in relation to that Owner's Project (collectively all recipients of such reports the "Recipients").

In general, the Independent Engineer reviews work prepared by others and does not prepare original engineering design products.

Prior to sanction and commencement of construction of the LCP Project ("Phase 1"), the role of the Independent Engineer is to review the principal aspects of the engineering design, cost and scheduling estimates, and the technical provisions in the principal Project contracts and permits. The Independent Engineer will identify issues uncovered during the review and, if requested by the Owner, will meet with the Owner, the EPCM Contractor, SNC-Lavalin Inc ("EPCM Contractor"), the Clients and the Owner's and Clients' financial, technical and other advisors ("Other Advisors") to explain the Independent Engineer's initial observations, comments and findings on each issue.

After sanction and financial close, during construction ("Phase II") the role of the Independent Engineer is to review the engineering, procurement, construction, and testing and commissioning phase of the Project and to act as the Independent Engineer on behalf of the Clients, as defined in the credit agreements that will be created between the Owner and the Clients.

The Independent Engineer will also provide advice and written reports to the Client and the other Recipients. The purpose of the advice and reports includes advice on technical matters that could impact the successful completion and integration of the Projects and the ability of each of the Projects to service their construction and long-term debt.

The following breakdown of tasks is illustrative, but not exhaustive, of the scope of the Independent Engineer's services.

## B. PHASE 1: PROJECT TECHNICAL REVIEW PRIOR TO FINANCIAL CLOSE

The Independent Engineer's Phase I review will be based upon the Project documentation and written information provided by Nalcor or the Owners in response to the data request and site visit.

# 1. Task 1: Initial Project Scope Meeting and Obtain Project Documentation

The Independent Engineer will attend a meeting with the Client, Nalcor, the Owner, and their respective advisors during which time: the scope of services provided by the Independent Engineer will be finalized and agreed; the data and documentation required to conduct those services will be defined; a proposed site visit will be discussed and arrangements finalized; and the date by which the draft report is to be issued by the Independent Engineer will be agreed.

At this initial meeting, the format of the Independent Engineer's reports will be discussed and agreed, including the procedure for submission of drafts for comment, incorporation of comments, and production of final versions of the report. If the lender Clients subsequently require a different format or process for such reports, the Independent Engineer will comply with their requirements.

# 2. Task 2: Site Visit

The Independent Engineer will visit the site of the Muskrat Falls Generation Project, the site of the AC/DC Converter Stations, the site of the switchyards, the site for the crossing of Strait of Belle Isle and, if required, selected portions of the proposed transmission route. The purpose of the visit is for the Independent Engineer to familiarize itself with the site and to verify and confirm whether there are any unusual characteristics of the site(s) that could present significant obstacles to successful completion of each Project. In particular, the Independent Engineer will review and comment on:

- General topography and condition of the grounds and equipment;
- Storage and lay-up procedures for installed and yet to be installed equipment;
- Location and storage conditions for uninstalled equipment and materials;
- Confirm current status of construction completion and major items to be completed; and
- Access to and status of construction of off-site facilities for interconnection to electric power, water, waste disposal, and fuel supply.

# 3. Task 3: Review Project Design and Projected Performance

The Independent Engineer will review available Project documentation for the purpose of identifying missing, inconsistent or unresolved information.

The Independent Engineer will assess the compatibility of the basis of design with the Project operating requirements, site characteristics, hydrology characteristics and off-site transportation requirements.

Generally, the Independent Engineer will review the design of major on-site facilities included within each Project, as well as Project-related, off-site facilities within the scope of the Project to support construction and operating activities. Major equipment components and systems will be reviewed by mechanical, electrical, civil/structural and environmental engineers with regard to:

- Capability of design to perform as required;
- Capability of design to meet availability and reliability requirements; and
- Conformance of design with "good engineering practice" (i.e., industry standards and prudent utility practice).

Any major equipment component or system design feature that does not appear to meet design, performance or operating requirements, or fails to adhere to good engineering practice will be identified. The Independent Engineer will provide an opinion on the quality of the design and equipment with respect to its effect on the anticipated service life of the Project, the degree of maintenance needed to meet performance requirements, long-term availability and anticipated performance degradation over the term of the Client's interest in the Project.

The Independent Engineer will also review the extent to which each major equipment component for the Project has been operating commercially under comparable conditions in other locations, and comment as to the anticipated performance based on their proven performance in other locations.

The Independent Engineer will review the technical design of the Project, projected performance for compliance with generally accepted industry standards and prudent utility practices, and the ability to operate in accordance with Pro Forma projections and contract requirements. In general, the following will be addressed to the extent applicable to that Project:

- Compare projected performance to design conditions, vendor guarantees and known performance of other similar facilities;
- Review hydrology;
- Review design, performance and integration of the major systems, as well as the projected reliability and operations under various operating conditions;
- The capability of the Project as designed to meet its operating, contractual and other requirements (e.g., as specified in the applicable agreements);

- Review major systems and equipment design criteria and performance to confirm their suitability, compatibility and completeness for the intended service of the equipment, and in particular that the design is conservative, that proven reliable equipment and systems are utilized, and that operating environments and parameters for equipment are within established precedents;
- Review and discuss the commercial operating history of major equipment in comparable applications, as well as Project-specific equipment performance;
- Review the proposed electrical interconnections between each Project;
- Review the projected water supply, wastewater disposal systems and other applicable waste disposal plans, historical performance and projected performance;
- Review the various technical criteria and other provisions within the technical documents and, if available, contracts for consistency;
- Review the experience and capability of the major Project participants to perform their roles in each Project and to support the successful execution and completion of the Project.

# 4. Task 4: Review Construction Plan and Schedule

The Independent Engineer will review the construction plan for each Project, including the following.

# **EPCM Contract**

The Independent Engineer will review the scope of services and technical provisions of the Engineering, Procurement and Construction Management Contract ("EPCM Contract") to identify that:

- The responsibilities of the parties are clearly defined under the contract, such as those associated with the EPCM contractor's and Owner's responsibilities; and
- The scope of work, communication and interface requirements between the EPCM Contractor, Owner, other contractors, and dispute resolution provisions are clearly defined.

The EPCM Contract is currently a single contract, and it is intended to be separately applicable to each Project. The Independent Engineer will review and report on the EPCM Contract as it is applicable to the relevant Project, and its ability to integrate each Project with the other Projects.

# **Construction Contracts (other than EPCM Contract)**

The Independent Engineer will review the construction plan for each Project, including:

- Review the scope of supply and technical provisions in the supply and construction contracts including:
  - Qualification of contractor(s);
  - Qualification and selection of major subcontractors;
  - Completeness of scope of work;
  - Extent to which the contracts can be performed independent of other contracts and the clarity of the battery limits of each contract;
  - Contractor and Owner's responsibilities;
  - Provisions for guarantees, warranties and latent defect periods;
  - Change order procedures;
- Review the transportation plan for delivery of equipment and materials to the appropriate site(s);
- Review the logistics and storage of construction materials on and off-site;
- Comment on the conformity of the proposed contracts relative to industry standards and prudent utility practice; and
- Review compensation terms and methods of payment relative to industry standards and loan document requirements.

# **Guarantees and Liquidated Damages**

The Independent Engineer will review the completion and, where applicable, performance guarantees and associated liquidated damages and bonus payments, buydown and buyout provisions, liquidated damage caps, and total liability provided by the contractors and major equipment suppliers.

The Independent Engineer will review and comment on the guarantees provided by each of the construction contractors and major equipment suppliers to assess the potential for compliance

with the applicable Project contracts, permits and performance expectations. The Independent Engineer will also review and comment on guarantees provided by each major equipment manufacturer, to the extent that this information is available, to assess the level of support that these equipment guarantees provide to the Owner.

## **Construction Schedule**

The Independent Engineer will review the Project schedule and each of the construction schedules and determine whether adequate provisions have been made for design; equipment procurement, fabrication, shipment and installation; and start-up, shakedown, testing and commissioning of the Project. Any unknown or variable elements in the schedule will be identified along with associated potential risks.

The Independent Engineer will also:

- Review and assess the Project construction, engineering and procurement schedules and critical paths including analysis of the major third party deadlines;
- Comment on the likelihood of achieving Project construction milestones in accordance with the completion requirements of the Project; and
- Review the major equipment supply contracts with regard to performance guarantees to assess the level of support provided to the contract guarantees.

# **Performance Test Criteria**

The Independent Engineer will review the performance test criteria for each contract and major equipment supply package, as applicable, and review the performance test criteria for the Project, and also where applicable its integration with the other Projects, as provided by the Owner, and will comment on the following:

- Reasonableness of the performance test criteria;
- Adequacy of the test duration;
- Ability to extrapolate test results over the expected life of the Project;
- Conformance of test procedures to establish codes and standards for testing Project equipment; and
- Ability to achieve all conditions required by the EPCM Contract and by each of the individual contracts.

# 5. Task 5: Review Capital Budget

# **Total Project Cost Estimate**

The Independent Engineer will generally:

- Project costs, including but not be limited to the engineering, procurement and construction contracts. This review will include, but not be limited to items such as Project management, spare parts, working capital and start-up costs;
- estimate, are based on estimates versus fixed pricing; identify those items that are not based on fixed pricing along with the potential risks associated with these variables; and evaluate the level of contingency budgets compared to those of similar Projects with which it is familiar; and
- Review the cost estimate for any remaining facilities to assess the methodology used to develop the total Project cost estimate.

In particular, the Independent Engineer will review and comment on the construction scope and the cost estimate methodology used to determine the Project construction cost, including:

- Project Manager and construction contractor experience, compensation and budgets;
- Major equipment procurement costs;
- Interconnection and infrastructure completion costs;
- Spare parts;
- Contingencies;
- Start-up and commissioning costs;
- Camp costs;
- Ancillary infrastructure and services, including access and construction power, required to support the Project;
- Schedule of equipment delivery and work to be performed taking into account the issues associated with the site layout and location;

- Schedule of values and construction cash flow; and
- Allowances for contractor performance bonuses.

The Independent Engineer will highlight critical areas of cost structure and identify high sensitivity areas.

The Independent Engineer will provide a comparison relative to the public electrical utility industry and compare to facilities of a similar size and technology taking into consideration such items as location, available infrastructure, and labour costs.

As the Project is not being constructed under a single EPC contract, the Independent Engineer will apply particular focus on the associated price risks.

# **Drawdown Schedules**

The Independent Engineer will review the drawdown schedule generally appended to the contracts or, if not appended, the estimated drawdown schedule, and comment on whether each monthly cash drawdown amount is consistent with the Project schedules.

# 6. Task 6: Review Commercial Operation and Maintenance Services

# **Review Commercial Operation Services**

The Independent Engineer will conduct an engineering review of the Operations and Maintenance Plan and, if available, contracts and agreements for operation and maintenance. The review by the Independent Engineer will be limited to engineering issues and their possible impact on commercial issues and will not address legal or regulatory issues associated with the Project.

# Operations and Maintenance ("O&M") Plan

The Independent Engineer will review the Project's O&M Plan, including the adequacy of the start-up and long-term operating procedures; the reasonableness of the annual O&M budgeting process, as well as the O&M fee structure and its ability to cover "non-extraordinary expenses"; the definition of "extraordinary expenses"; and the proposed training and preventative maintenance programs.

# **Operating and Maintenance Cost Estimate**

The Independent Engineer will review the list of O&M and major maintenance cost estimate components, comment on its completeness and the basis and assumptions upon which each component was calculated and comment on their reasonableness. This effort will include a

review of staffing, maintenance provisions, spare parts, water, waste disposal, administrative costs, management fees and consumables.

# 7. Task 7: Review of Project Agreements

Review the ability of the Project, based on the design criteria, to meet the operating and technical requirements of the applicable operating agreements and the financial goals for the Project, including but not limited to the following to the extent applicable to the Project:

- Power Purchase agreements;
- Interconnection facility agreements;
- Water Management Agreement;
- Water supply and wastewater disposal agreements;
- Fuel supply and transportation agreements;
- Operation and maintenance agreements;

The Independent Engineer will comment on contract provisions to market norms with respect to:

- Term and termination;
- Budget review and control;
- Owner/Operator Responsibilities;
- Operations and maintenance plans;
- Environmental compliance;
- Reporting procedures;
- Compensation and incentive bonus and penalty structure to determine cost effectiveness and compatibility with long term operations and maintenance objectives; and
- Consistency amongst construction, operation and maintenance, service, fuel, capacity and energy sales, water management, both amongst each other and compliance with the environmental permits and requirements.

# Power Purchase and Interconnection Agreement(s)

The Independent Engineer will review the technical aspects of the agreements to determine if the provisions are compatible with the expected output of the Project and that the design conforms to the interconnection requirements of the contracts. Specifically, the Independent Engineer will review the conditions that must be satisfied to qualify for full energy and capacity payments, and conditions under which the utility can dispatch the Project or limit its power output.

# **Water Usage Agreements**

The Independent Engineer will review the Water Management Agreement and determine whether it allows the Project to perform to its projected capacity.

### **Loan Documents**

The Independent Engineer will review the technical aspects in the financial agreements to ensure consistency with Project contracts and performance assumptions, including for example:

- Budget review and approval process; and
- Owner/Operator reporting requirements.

# 8. Task 8: Review of Permits and Licenses

The Independent Engineer will assess the ability of the Project, based on design criteria and intended modes of operation, to meet and maintain compliance with technical requirements of the applicable major permits including reporting requirements and other operating restrictions.

The Independent Engineer will review the schedule of permits, licences and approvals required from authorities having jurisdiction for construction and operation, and all available permits or permit applications. The Independent Engineer will:

- Assess the capability of the Project as designed to meet the technical requirements and constraints (e.g., operating restrictions, etc.) specified in the Project's permits, licenses and approvals;
- With the assistance and approval of the Owner, establish contact with the appropriate provincial and federal environmental or energy regulatory agencies for the purpose of independently identifying and determining the current status of the major permits, licenses and approvals to construct and operate the Project, provided however that the Independent Engineer shall closely coordinate all such contacts with and through the Owner;

- Identify what major permits, licences and approvals have not been obtained and comment, from a technical perspective, on the likelihood that they may or may not be able to be obtained in a timely manner to support the Project schedule;
- Review the adequacy of budgeted amount in the capital budget to obtain and maintain compliance with the permits, licences and approvals, including the cost of habit compensation measures and meeting commitments made by the Owner in its application(s) for same;
- Address technical and commercial issues arising from zoning, local municipality requirements or other agencies having jurisdiction over the Project; and
- Review environmental site assessment report(s) prepared by others and comment on such issues as:
  - Documentation and support for the conclusions reached in the report;
  - Unusual circumstances or locality specific issues; and
  - Status and cost of any required remedial activities.

# 9. Task 9: Review of Pro Forma Assumptions

The Independent Engineer will review and comment on the technical assumptions and data input to the Owner's Project pro forma financial model which sets forth the projected revenues, expenses and debt service costs of the project. The performance model used by the Owner to estimate annual water usage and operating costs and annual revenues from the sale of power will be evaluated to determine if it accurately reflects the material Project contracts and expected operating environment. The Independent Engineer will determine how well the assumptions and Projections made in the pro forma are supported by contract guarantees, performance testing, quality of the design and equipment, and the experience of the Project participants.

It is anticipated that the revenue portion of the pro forma will be based on fixed monthly payments and therefore extensive review of market studies by the Independent Engineer is not anticipated or required.

The Independent Engineer will verify that the following assumptions are reasonable and consistent with the design of the Project, expected operating scenarios, and Project agreements:

Project performance and reliability;

- Revenue projections;
- Facility performance degradation;
- Dispatch constraints (if any) as per the power purchase agreement including curtailments and part load operation;
- Escalation assumptions;
- Annual operating and maintenance expense inputs to the pro forma, including major maintenance and capital replacement;
- Bonus/penalty arrangements;
- Working capital requirements of the Project;
- Cost for establishing inventories; and
- Adequacy of pre-operating expense budget; i.e., operator training, consumables, lubricants and testing.

The Independent Engineer will propose and review a set of typical pro forma sensitivity cases. Sensitivity cases will be selected to test the impacts of variances in key operating assumptions, such as; interest rates, inflation, capacity and heat rate and operating expenses. Review and comment on sensitivity cases to the base case pro forma.

# 10. Task 10: Prepare Independent Engineer's Report

The Independent Engineer will prepare a draft and final Independent Engineer's Report, in a format suitable to the Client.

The report will provide a brief description of the Project facilities and key agreements and will set forth the principal assumptions, opinions, conclusions and summarized pro forma operating results. During the course of its review, the Independent Engineer will bring to the Client's and the Owner's attention any area of risk that is discovered as a result of the technical review and any mitigation options to be considered by the Client and the Owner.

A draft of the Independent Engineer's Report setting forth preliminary opinions, conclusions and pro forma results, including discussions of any unresolved issues and associated risks identified during the review, will be prepared and submitted to the Client and the Owner for review and comment. Having addressed issues raised in the draft report, to the extent possible, the Independent Engineer will incorporate the Client's comments, and consider and at its discretion address the Owner's comments, and present the status of each issue in the final

Independent Engineer's Report.

# 11. Task 11: Financial Closing Support Services

The Independent Engineer will support financial close by providing information on the Project to the Clients, including prospective investors or lenders, hedge providers and the federal guarantor, either in person or via conference calls. The Independent Engineer will also participate in rating agency meetings and syndication presentations as requested by the Client. The Independent Engineer will prepare the typical and customary certificates required at financial closing to verify the accuracy of the information provided in its report.

# C. PHASE 2: CONSTRUCTION PERIOD

The Independent Engineer will perform the following tasks following financial close and during the construction of the Project.

# **Attend Project Review Meetings**

The Independent Engineer will attend Project review meetings (with required frequency as determined by the Independent Engineer in consultation with the Client and the Owner) at the Owner's or the contractors' offices to assess progress in engineering, procurement and construction activities and to review the contractors' presentation of areas of concern and change orders.

# **Services Relating to the Engineering**

The Independent Engineer will review the progress of the remaining engineering for compliance with the milestone schedule.

# **Services Relating to Procurement**

The Independent Engineer will review the progress of the award of major procurement contracts and delivery commitments for conformity with the milestone schedule.

# **Services Relating to Construction and Start-Up**

The Independent Engineer will:

- Review proposed work and quality control plans;
- Conduct periodic on-site visits (with required frequency as determined by the Independent Engineer in consultation with the Client and the Owner) for observation of the work in progress to determine that the Project is proceeding

in general accordance with the milestone schedule and with the agreed-upon design concepts;

- Periodically review quality control reports and field laboratory test reports;
- Consult with the Owner and contractors in advance of scheduled major inspections, tests or the start of important work phases;
- Review compliance to the Project schedule on a monthly basis through reports submitted by the construction contractors, and on-site observation; and
- During the on-site visit, review the contractors' monthly invoice with the Owner and construction contractors to verify accuracy.

# **Review Change Order(s) to the Construction Contracts**

To the extent required by the financing agreements, the Independent Engineer will review major change orders to the construction contracts. The review will include a verification of the impact of change(s) on the construction cost and schedule of the Project and on the ability of the Project to meet its performance guarantees. Review of major change orders or significant changes in Project execution or budget will be performed if required by the financing agreements at Client's authorization but will constitute additional services.

# **Prepare Independent Engineer's Periodic Report**

The Independent Engineer will review the borrower's, and construction contractors' progress report(s) and supporting documentation against observations during the site visit and prepare a summary report. The report shall cover the general status of construction versus the milestone schedule, the status of the budget versus actual expenditures, status of planned contract expenditures versus planned, status of change orders or claims and any areas of concern and actions being taken of which we are aware. The Independent Engineer's Report will be submitted to the Client, with a copy to the Owner.

# **Prepare Independent Engineer's Draw Certification**

The Independent Engineer will review the Client's monthly loan requisition certificate and supporting documentation, will compare the actual budget and schedule against the contract budget and schedule, will request changes or supplemental information as required to approve drawdown requests, will prepare the monthly Independent Engineer's draw certification that will make a recommendation to the Client regarding the payment due and will submit same to the Client, with a copy to the Owner.

# **Verify Project Completion**

The Independent Engineer will confirm Project completion as required by the financing agreements which will include, but not be limited to, the review of construction contracts' completion certificates, monitoring successful completion of each punch list item by telephone, make one final visit to the Project site to verify punch list items have been completed, sign the appropriate document and submit it to the Client, with a copy to the Owner.

The Independent Engineer will also provide such certification to the Client as may be required by the financing agreements, including certification that the engineering, design, construction, testing and commissioning of the Project conforms to the applicable contracts, codes, standards, good industry practice and prudent utility practice.