

COALITION/IEC (MGF) – 1

Tab and Appendix:	Section 1 Executive Summary and Section 8 Conclusion	Page No. (and line no. if applicable):	pp. 1, 161, 162, 163
Topic:	Overall Keeyask Project Management		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that the largest single contributor to the prior budget increase from \$6.5B to \$8.7B is the amount added to the original General Civil Contract (GCC) on account of the Contractor’s poor productivity and increased indirect cost as a result of the longer contract interval. It is stated further, that the GCC Contractor is not meeting the revised productivity factors agreed to in the February 28, 2017 Amending Agreement #7, adding further costs and schedule impacts and it is now the view of MGF that the Final Project Cost may well be in the range of \$9.5B to \$10.5B.

Question:

- a) Given the above and given that Manitoba Hydro (MH) has not yet demonstrated that it has the skills and/or experience to provide the construction management needed for this project, does MGF believe that MH can internally acquire these necessary skills and further training or hire additional suitably trained staff in time to effect better results in a material way on the remainder of the project?
- b) If MGF believes that MH does not have the requisite skills/experience and cannot staff for them and is unlikely to be able to acquire the necessary training, does MGF believe that MH should hire an external contract management organization to provide these services and does MGF believe that such an organization would be readily available for an assignment such as this.

- c) Given that the GCC has already been amended once (Feb. 28, 2017) does MGF believe that further contract language modifications are advisable or even possible so as to force or incent (or both) better contractor performance? Given that it is stated in the Conclusions on page 161 that “the GCC contractor gets paid its actual costs irrespective of the quantity of work performed, the quality or the time it takes to perform the work”, can MGF suggest some additional contract language to deal with this very undesirable situation (this matter is also detailed in the attached Klohn Crippen Berger Report at pages 34 and 35)?
- d) With respect to the various GCC transgressions as noted on page 162 such as not meeting agreed-on productivities, not meeting agreed-on schedule milestones, filing late progress reports, and generally carrying out inaccurate reporting, is it the view of MGF that this is due to:
- i. inexperienced, untrained or unqualified MH staff?
 - ii. inadequate or untimely data for MH staff to review?
 - iii. inadequate contract language such that MH is unable to compel better contractor performance?
 - iv. unwillingness of MH personnel to compel the Contractor to meet agreed-on performance metrics?
 - v. something else, and if so, what does MGF feel that could be?
- e) Regarding other impacts as a result of poor performance by the GCC contractor, it is stated at page 162 that delays in the GCC will cause delays and disruption claims from other contractors. What does MGF believe the magnitude of these claims could be and how many other contracts could be involved?
- f) Since MGF does not state whether the project budget estimate values given at page 1 are calculated at a P50 or a P90 Confidence Level, please state at what level these

values are provided. Furthermore, does MGF agree that if they are stated as P50 levels, the \$10.5B project estimated provided could approach \$12B at a P90 level?

Rationale for Question:

RESPONSE:

- a) Yes.
- b) This is also a possible strategy for MH.
- c) This is typical of a cost reimbursable priced contract. To attempt to change this would significantly change the risk allocation of the contract currently in place and might be difficult to achieve.
- d) MH Personnel are competent and experienced. How the resources are utilized on the project could be reviewed.
- e) To answer this question, the GCC schedule would need to be re-visited and developed with realistic assumptions relating to productivity and cost. Once established, then those contracts that follow and interface with the GCC would need to be updated to align with the GCC schedule. Potential impacts of delays and disruption can be analyzed and strategies to mitigate can be explored and negotiated with those contractors.
- f) The estimate range contains contingency and the upper end of the range is \$10.5 billion.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 2

Tab and Appendix:	Scope Item 1, Finding No. 6	Page No. (and line no. if applicable):	pp. 12, 13
Topic:	Keeyask Project Cost Overrun - General Civil Contract (GCC)		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated on page 12 that much of the cost increase on the Keeyask Project is due to poor productivity on the GCC. It is also stated on page 16 that some of the project cost increase was as a result of “schedule incentive profit”.

Question:

- a) Since this part of the Report is redacted, can MGF provide more detail as to the “schedule incentive profit” and also state how material this aspect is with respect to the overall cost increases in the GCC?

Rationale for Question:

RESPONSE:

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

Due to the redaction of this figure.

COALITION/IEC (MGF) - 3

Tab and Appendix:	Scope Item 1, Finding No. 7	Page No. (and line no. if applicable):	pp. 13, 14
Topic:	Keyask Project Cost Overrun - Generating Station		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated on page 14 that there are cost increases in the Turbine and Generation Budget due to estimated delay impacts as a result of delays in the GCC.

Question:

- a) Since this part of the Report is redacted can MGF provide more detail as to the impact due to the estimated GCC delays and also state how material this cost increase is with respect to the other cost increases estimated for the Turbines and Generators?

Rationale for Question:

RESPONSE:

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

Due to the redaction of this figure.

COALITION/IEC (MGF) - 4

Tab and Appendix:	Scope Item 3, Finding No. 1	Page No. (and line no. if applicable):	pp. 34, 35
Topic:	Keeyask Project Cost Estimating		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated on page 34 that there are various deficiencies in MH's Cost Estimating approach including misalignment of the estimating details with respect to the associated cost and summary reports.

Question:

- a) Is it the view of MGF that MH is likely to be able to incorporate a better cost control and cost reporting system including better contract change approval and reporting on its own or would it be preferable for MH to utilize external resources for this function?

Rationale for Question:

RESPONSE:

Estimate validation and tender evaluation would be two suggested areas of improvement; this would also increase MH's visibility into project cost control during execution. This is within MH's capability.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 5

Tab and Appendix:	Scope Item 3, Finding No. 4	Page No. (and line no. if applicable):	pp. 35, 36
Topic:	Keeyask Estimate Adjustments		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the MGF Report on pages 35 and 36 that a great deal of information for the Keeyask Project Estimate was established in early days (some from 2006, some from 2010) and although these estimates were escalated to the current timeframe, MGF stated that complete new estimates should have been developed for some work packages for this project.

Question:

- a) Given that work is now well underway for the Keeyask Project, is it MGF’s view that there are any learnings that MH can now take from this finding and incorporate to further improve its Contract and Construction Management of this project?

Rationale for Question:

RESPONSE:

MGF believes this is adequately covered within MGF’s report.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 6

Tab and Appendix:	Scope Item 4, Finding No. 1	Page No. (and line no. if applicable):	p. 40
Topic:	Keeyask Basis of Schedule		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report by MGF that there is no current “Basis of Schedule for the Integrated Master Schedule” for the Keeyask Project.

Question:

- a) Is it the view of MGF that this document is not in place due to:
 - i. inexperienced, untrained or unqualified MH staff?
 - ii. inadequate contract language that did not require that such a schedule be in place?
 - iii. some other reason, and if so, what does MGF believe that could be?

Rationale for Question:

RESPONSE:

The Basis of Schedule is generally developed by the master scheduler when the schedule is created. On the Keeyask Project, the current scheduler is not the same individual who developed the original schedule. We do not know why the Basis of Schedule was not developed by the original scheduler.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 7

Tab and Appendix:	Scope Item 4, Finding No. 3	Page No. (and line no. if applicable):	p.42
Topic:	Keeyask Schedule Baseline		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that MH’s definition of a baseline schedule revision allows the project schedule to be changed without referencing the original schedule and without incorporating any Contract Change Management procedures.

Question:

- a) Since schedule changes of this nature do not allow planned versus actual work to be tracked it would provide for improved Contract Management if MH’s current process could be modified. Is it the view of MGF that MH could implement revisions in its Schedule Change Management procedures at this time or are there impediments to this kind of modification in the current contract language?

Rationale for Question:

RESPONSE:

We believe MH could implement revisions in its Schedule Change Management procedures.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 8

Tab and Appendix:	Scope Item 4, Finding No. 4	Page No. (and line no. if applicable):	pp. 42, 43
Topic:	Keeyask-BBE Schedule Negative Float		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that a review of BBE schedules indicates that in many cases that BBE is behind schedule and is not meeting its commitments and many of these activities are on the overall project critical path. It is also stated in the Report that there is contract language that requires BBE to comply with its schedules and commitments, yet MH is allowing these transgressions to occur.

Question:

- a) In the view of MGF, is MH allowing this to happen because:
 - i. MH staff is inexperienced, untrained or unqualified?
 - ii. MH has inadequate staff to manage all of the contracts that are in place?
 - iii. there is some other reason, and if so, what reason does MGF think could possibly allow this to occur?

Rationale for Question:

RESPONSE:

The GCC is very prescriptive on schedule requirements. MH has the contractual right to insist that the contractor complies with its obligations. One obvious benefit is a more realistic schedule with which to guide the delivery of the contract.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 9

Tab and Appendix:	Scope Item 4, Finding No. 6	Page No. (and line no. if applicable):	p.44
Topic:	Keeyask-BBE Forecast Completion Date		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

In the Report it is stated that MGF is now forecasting a Project Completion Date of November 2022 vs. the planned Project Completion Date of October 2021.

Question:

- a) Given that a further project delay of 13 months is now being forecasted, does MGF believe that there are mitigation plans that can be reasonably put in place to bring the project back into schedule? If so, is MGF aware of any companies that could assist MH in bringing the project back on track?

Rationale for Question:

RESPONSE:

Yes, MGF believes this is within MH's capability.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 10

Tab and Appendix:	Scope Item 5, Finding No. 2	Page No. (and line no. if applicable):	p.54
Topic:	Keeyask Contract Management		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that it is best practice to perform contract audits to ensure contract compliance, however, MGF found that MH had conducted only one audit to date.

Question:

- a) Is it the view of MGF that MH is not performing audits because:
 - i. MH staff are not trained to perform this function?
 - ii. MH has inadequate staff to carry out this function?
 - iii. there is some other reason, and what does MGF think could be the reason that MH is not performing this function?

Rationale for Question:

RESPONSE:

Contract audits can be performed by internal resources and MGF suggests that they should be done more frequently.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 11

Tab and Appendix:	Scope Item 5, Finding No. 7	Page No. (and line no. if applicable):	p. 58
Topic:	Keeyask Craft to Foreman Ratio		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that BBE indicates as per October 2017 that it is employing a Craft to Foreman Ratio of 3.97:1 on the project and MGF states that this ratio should be in the order of 6:1.

Question:

- a) Given that in the Keeyask Recovery Plan Report (Manitoba Hydro 2017/18 and 2018/2019GRA Pre-Filed Evidence Tab 2 page 46) it is stated that there appeared to be inadequate construction work supervision on the work site and that additional supervision (Foremen?) were recommended, could MGF comment on this apparent contradiction?

Rationale for Question:

RESPONSE:

It depends on what MH considers as Supervision. Typically, Supervision would be considered anything above a Foreman.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 12

Tab and Appendix:	Scope Item 5, Finding No. 12	Page No. (and line no. if applicable):	pp. 62, 63
Topic:	Keyask Board Recommendation		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that the contracting strategy employed for the GCC, (a cost reimbursable compensation mechanism with potentially overly aggressive productivity factors), has been and is currently problematic for MH (this matter is also detailed in the attached Klohn Crippen Berger Report at pages 34 and 35).

Question:

- a) Given that the contract is in place and has already been modified once (Feb. 28, 2017), are further modifications suggested by MGF, and if so, what would these modifications consist of and what potential savings could be achieved?

Rationale for Question:

RESPONSE:

The opportunity to change the risk allocation model and pricing mechanism would have been as part of the negotiation of Amending Agreement No. 7. MGF is not aware whether BBE would have entertained moving to a lump sum priced contract. MH does have the opportunity and the contractual right to work with BBE to improve its performance and develop a credible and achievable execution plan, underpinned by a realistic schedule and forecast cost at completion.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 13

Tab and Appendix:	Scope Item 5, Finding No. 13	Page No. (and line no. if applicable):	pp. 63, 64
Topic:	Keyask Estimated Final Cost Range		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that MGF believes the final cost for the Keyask Project will exceed the current budget of \$8.7B and that the final cost will be in the range of \$9.5B to \$10.5B. In the Report MGF recommends that MH take control of the Project and the Contractors and MGF states that “There are many cost saving and contract management exercises that MH can implement which will drive down the Final Cost”.

Question:

- a) Can MGF provide a list of the typical “cost saving and contract management exercises” that MH could implement along with the possible savings provided by each of these activities?
- b) Does MGF believe that MH has an adequate number of suitable, trained contract management employees to carry out its suggested plan?
- c) If MGF believes additional training or additional resources are needed by MH to effectively manage its contracts, how much time does MGF believe is required to put these resources or training in place?
- d) Does MGF believe that there are consulting companies or other organizations available with the requisite skills and experience that could assist MH in this endeavour?

- e) Does MGF believe that if situations continue to deteriorate with this project that there is a point where it would recommend that MH attempt to end the activities of the current General Civil Contractor.

Rationale for Question:

RESPONSE:

- a) Further collaborative analysis with MH would be required to answer this. At a high level the contract provides MH with appropriate mechanisms with which to manage this project.
- b) In MGF's opinion, MH should take a more hands-on approach and deploy site supervisors with trade backgrounds.
- c) MGF has not commented on training in the report.
- d) Yes.
- e) The termination of the GCC was considered by MH as part of the process resulting in Amending Agreement No. 7. The termination of a contractor mid contract and appointment of a replacement contractor is not a decision to be taken lightly. MH needs to consider under what conditions it might take such drastic action. It is more appropriate for MH to work with BBE to ensure a predictable outcome to the GCC in terms of schedule and final cost.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 14

Tab and Appendix:	Scope Item 7, Finding No. 1	Page No. (and line no. if applicable):	p. 69
Topic:	Keyask Cost Contingency		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

In Appendix O of the Keyask Project Capital Project Justification Addendum 14.0 Risk Contingency, it states that the contingency that should be carried for a P90 confidence level was [a redacted amount]. MGF states further in the Report that since BBE is still lagging in its productivity performance, the P90 amount (rather than the P50 amount) should now be used for the Project Cost Contingency.

Question:

- a) Using suitable Confidentiality Provisions, can MGF provide the P90 Contingency amount for this item?

Rationale for Question:

RESPONSE:

The Coalition would need the permission of MH in order to disclose the redacted amount.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 15

Tab and Appendix:	Scope Item 8	Page No. (and line no. if applicable):	pp. 70, 71
Topic:	Keyask Concrete Quantity and Earthwork Fill Reporting		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report with respect to concrete work that MH is accepting “inconsistent inaccurate and unreliable reporting” from BBE and with regard to Earthworks, the proposed completion dates are potentially in jeopardy.

Question:

- a) Given that MH seems incapable of monitoring construction reports or construction progress on a consistent basis, does MGF feel that this is due to a lack of resources by MH or a lack of training for MH personnel?
- b) If MGF feels that training or a resource shortfall at MH is the problem, how much more training or how many more resources would MGF recommend that is needed for MH to be able to perform these functions in an effective manner?

Rationale for Question:

RESPONSE:

- a) MH is not incapable; however, MGF believes there are areas that can be improved.
- b) MGF has not reviewed training. Refer to 13 b).

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 16

Tab and Appendix:	Scope Item 9	Page No. (and line no. if applicable):	pp. 72-80
Topic:	Keyask Construction – Various Items		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated that in the course of reviewing the progress of construction on the project to date, various concerns have been observed by MGF including:

- BBE is not meeting its commitments with respect to the installation of structural steel;
- BBE is not meeting its commitments with respect to the placement of Earthwork fill and contract productivity is also lagging in this area;
- the scaffolding work done by contractors on the site is not cost-effective;
- the contractor has consistently failed to meet its concrete placement commitments and contract productivity is also lagging in this area;
- BBE typically provides late reports for its monthly reporting requirements and also it has been noted that the BBE reports have numerous inaccuracies.

Question:

- a) Given that MH seems incapable of monitoring construction reports or construction progress on a consistent basis does MGF feel that this is due to a lack of resources by MH or a lack of training for MH personnel?

- b) If MGF feels that training or a resource shortfall at MH is the problem, how much more training or how many more resources would MGF recommend that is needed for MH to be able to perform these functions in an effective manner?
- c) If the Contractor continues to fail to meet its contractual commitments, is it the view of MGF that penalties should be imposed on the Contractor and if so what sort of penalty does MGF feel would be appropriate?

Rationale for Question:

RESPONSE:

- a) Refer to Response 15 a)
- b) Refer to Response 15 b)
- c) The current contract provides for a maximum liability of [REDACTED] if the contractor misses the Ready for Commissioning dates for the Turbine-Generators. 1a

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 17

Tab and Appendix:	Scope Item 10, Finding No. 3	Page No. (and line no. if applicable):	p. 86
Topic:	HVDC Converter Stations – Risk Management		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that “Recent Contractor submissions show delays in activities that could jeopardize the ISD and the Contractor’s critical paths keep changing”.

Question:

- a) In the view of MGF, why is MH unable to manage this contract properly?
- b) Does MGF feel that MH has an adequate number of trained employees working in this area?
- c) Does MGF feel that penalties should be imposed on the Contractor for these kinds of transgressions and if so, what penalties could be utilized?

Rationale for Question:

RESPONSE:

- a) This issue is caused by the contractor and MH has correctly identified this.
- b) MGF is unable to answer this.
- c) The existing contract would set out what actions MH can take in the event of delay in completion of the contract.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 18

Tab and Appendix:	Scope Item 17, Finding No. 1	Page No. (and line no. if applicable):	p.102
Topic:	Bipole III Transmission Line Risk Register		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is reported that there are currently deficiencies in the Risk Register with respect to dates missing (both for risk creation and for scheduled risk resolution), as well as with the assignment of the responsible individual.

Question:

- a) As a result of these omissions and deficiencies, does MGF believe there is a greater potential for project cost escalation or ISD delays for this project?
- b) Does MGF believe MH personnel currently have the skills, training and experience to manage this Risk Register and if not what is MGF’s recommendation to resolve this situation?

Rationale for Question:

RESPONSE:

- a) The finding relates to improving the structure of the Risk Register and how it is used to manage risk.
- b) Yes.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

COALITION/IEC (MGF) - 19

Tab and Appendix:	Scope Item 17, Finding Nos. 5, 6	Page No. (and line no. if applicable):	p.105, 106
Topic:	Bipole III Transmission Line - Rokstad Power Company Schedule		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

It is stated in the Report that the Rokstad Power Company is contracted to carry out certain parts (Sections N1, N4, C1 and C2) of the Bipole III Transmission Line. It is stated further, that Rokstad is falling behind in its work and the possible impact from a delay by Rokstad is a one-year delay in the overall project.

Question:

- a) In the view of MGF does MH have the skill, training and resources to manage this project to a successful and timely completion?
- b) If MGF does not believe MH has the skill, training and resources to effectively manage this contract, is MGF aware of a Consulting organization that can provide the appropriate assistance?
- c) Since it is indicated at page 110 of the Report that Rokstad has a line stringing productivity issue, does MGF take the position that Rokstad should be removed from the project and replaced with another contractor if it is clear that significant delays will result in the continuation of the Rokstad contract?

- d) Since it is also indicated in the Report that there are concerns regarding the contract performance of Forbes Brothers Ltd with respect to line construction (Scope Item 20, Finding No. 3, page 116), does MGF believe that this is a situation that would require significant intervention by MH and if so, what does MGF believe would be an appropriate action?

Rationale for Question:

RESPONSE:

- a) Yes. The issue is a contractor that is not performing as per its schedule. MH is addressing this.
- b) See a) above.
- c) MGF is unable to comment on whether to terminate Rokstad. MGF understands that MH has removed scope from Rokstad to manage this risk.
- d) Although Forbes has had performance issues which continue into the 2017/2018 winter season, their current forecast completion date does not affect the overall project in-service date.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: