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 Subject: Fw: Contingency - Some Clarifying Points  
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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?  
 ----- Forwarded by Jason Kean/NLHydro on 03/06/2016 08:42 PM -----

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 To: Ed Martin/NLHydro@NLHydro, Paul Harrington/NLHydro@NLHydro, Dawn Dalley/NLHydro@NLHydro, Gilbert Bennett/NLHydro@NLHydro, Brian Crawley/NLHydro@NLHYDRO  
 Date: 08/14/2012 08:33 AM  
 Subject: Contingency - Some Clarifying Points

All,

I have just returned from vacation and in the process of catching up on the subject at hand. I will work with Paul to address Ed's latest comments to the deck.

Before that I hope to provide some clarifying context to assist with the understanding of the use of contingency.

Contingency is set as the expected or P50 outcome using an assessment of the potential quantified impact of known risks on the estimate. The same process (Westney) was applied at DG2 and DG3 to arrive at a recommendation. For DG3, we requested Westney to publish a specific Estimate Accuracy Analysis report (see attached) from which we calculated Estimate Contingency using the P50 outcome. It considers all project risks, except those caused by external macro-economic uncertainties (availability and demand for labor, schedule risk exposure due to labor productivity poor than expected).

Estimate contingency was determined through an assessment of the risks for each of the 3 projects (MF, LTA and LITL), including estimating uncertainties (e.g. quantity variation, etc). These are different for each Project, hence the required contingency to arrive at a P50 expected outcome differs. The resulting estimate contingency additions to the base estimate to arrive at a P50 expected outturn cost value that formed the basis of the CPW analysis were as follows: MF = 9.3%, LTA 9.3%, LITL = 3.8%.

Following this process, the range of impact of potential uncertainties or risks on the project at DG2 resulted in a spread of outcomes (i.e. the extremities) around the expected or P50 outcome that was much larger than we have at present, characterised by the term accuracy. Thus when we use the term accuracy, it is reflects a means of the width of this spread, typically considering the P10 and P90 outcomes. At DG3 the spread has narrowed, due to the increased level of project definition and amount of contracting completed.

As for accuracy of the DG3 estimate, an analysis of the Westney report indicates that the accuracy of the current P50 estimate is -11% to 13.1%. Thus, there is a 10% likelihood of the outturn cost will be 11% less than the P50 value used in the CPW analysis, and there is only a 10% likelihood that the outturn cost will be more than 13.1% beyond than the P50 value used in the CPW analysis. While we do not have a definitive accuracy assessment for the DG2 estimate, it was considered to meet the requirements of a Class 4 estimate with a typical accuracy range of -30% to +50%.

The accuracy and quality of the DG3 estimate is well within the required accuracy of a Class 3 estimate, and more towards a Class 2 estimate.

The estimated was concluded in May 2012, at which point the latest engineering information was considered - approximately 40% of overall engineering was complete at this point in time.

Regards,

Jason



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