

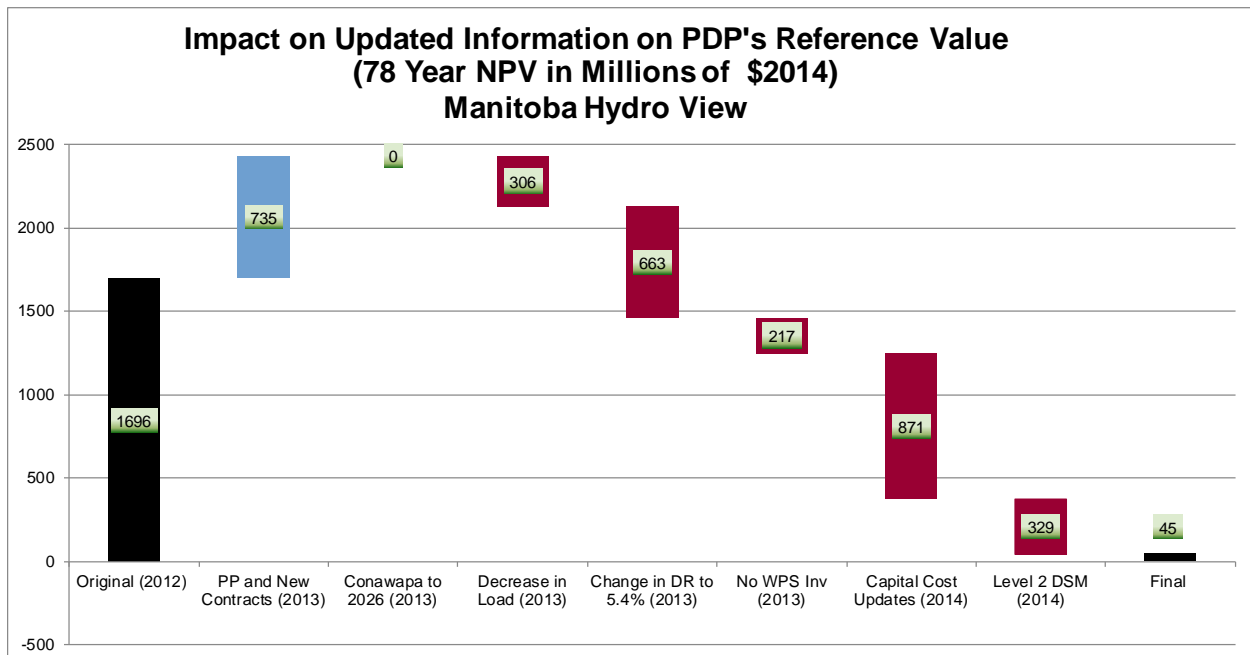
NEEDS FOR AND ALTERNATIVES TO (NFAT)

La Capra Associates Undertaking # 104

La Capra to provide a footnoted explanation with sources of the derivation of the calculations underlying slide 16 and slide 18 of La Capra Exhibit 45

Response:

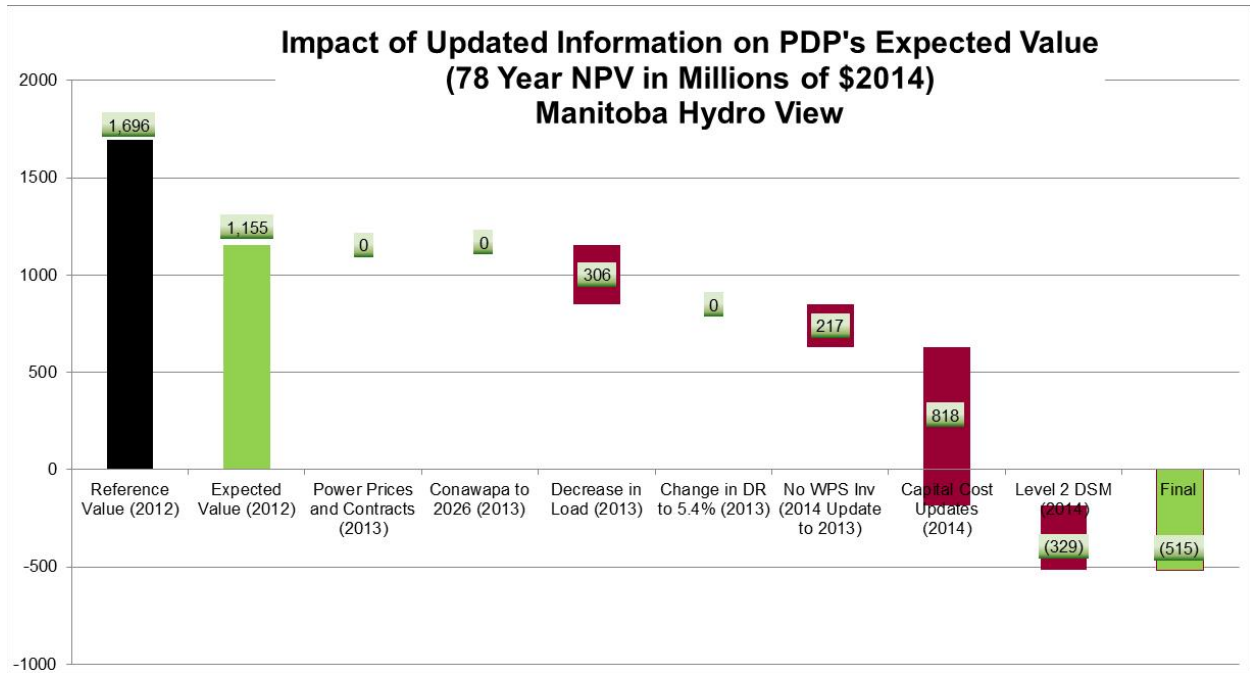
The chart from Slide 16 is reproduced below.



The values from the above chart are shown below in tabular form with their sources. All values originate from all reference scenario.

Stage of PDP NPV Development	Change in 78 Year NPV	Source
Original (2012)	1696	This value can be found in many different sources; it was recently shown on p. 115 of MH-095 for the reference case 2012 assumptions.
PP and New Contracts (2013)	735	Chapter 12 p.12 of MH's NFAT Business Case lists \$2,125 as PDP's incremental NPV using 2013 assumptions at a 5.05% discount rate. The difference between \$2,125 and \$1,696 (\$429M) represents the sum of the impact of changes due to updated load and electric market assumptions. \$735 is calculated using the aforementioned incremental NPVs and with the knowledge that \$306 is the approximated impact of a decrease in load (explained two rows below in this table). (i.e., \$429 = \$735 - \$306)
Conawapa to 2026 (2013)	0	LCA compared 2 sets of plans with a multi-year delays in Conawapa (Plan 15/Plan 12 and Plan 13/Plan 11) which showed a small amount of increase in costs per year (\$10-15 Million) when Conawapa is delayed. Thus we have estimated a minimal effect from a one year delay in Conawapa for this illustration.
Decrease in Load (2013)	-306	Table 12.12 in MH's NFAT Business Case identifies PDP's 78 year incremental NPV with a low load to be \$1,390, a reduction of \$306 from the original \$1696. A low load is defined in chapter 12 as an "amount of energy savings equivalent to over 4.5 times DSM." (p. 21) LCA concluded that \$306 was a reasonable approximation for the 4.0 times DSM stress test used in MH's 2013 update. (p. 24 of the NFAT).
Change in DR to 5.4% (2013)	-663	Using the cash flows for the PDP and All Gas Plan provided by MH on p. 91 and p.99 of the NFAT Business Case Appendix 9.3 the incremental NPV of the PDP was calculated with a 5.4% discount rate. The difference between the incremental NPVs with 5.05% and 5.4% discount rates was calculated to be \$663.
No WPS Inv (2013)	-217	On slide 123 of MH-95, the PDP's incremental NPV without WPS Inv at a 5.4% discount rate and with 2013 assumptions is shown as \$1,245. The difference between \$1,245 and PDP's incremental NPV with 2013 assumptions (\$1,462) is \$217.
Capital Cost Updates (2014)	-871	On slide 123 of MH-95, the PDP's incremental NPV using the 2014 updated capital costs for Keeyask and Conawapa and at a 5.4% discount rate is shown as \$374. The difference between this value and the \$1,245 (Slide 123 of MH-95, as above), the incremental NPV calculated with a 5.4% discount, is \$871.
Level 2 DSM (2014)	-329	On slide 130 of MH-95, PDP's incremental NPV with the 2014 update of "Level 2 DSM" is listed as \$45, a difference of \$329 from the \$374 incremental NPV at Base DSM.
Final	45	This is MH's final comparative value of the PDP Plan 14 as compared with the All Gas Plan when both are modeled with 2013 assumptions, DSM Level 2 and the higher capital costs for Keeyask and Conawapa.

The figure from Slide 18 is shown below.



These figure uses the same values explained above for the change in Conawapa in service year, the impact of lower loads, the impact of WPS no longer agreeing to fund part of the transmission project and the impact of adding DSM Level 2 to the All Gas and the Preferred Development Plan. We did not have the expected value derivations. LCA is using the reference values as approximations of the expected value impacts.

The Expected value impact of the increased capital costs was taken from the 2012 analysis updated for the 2014 capital costs that were provided by Manitoba Hydro in their March 10, 2014 presentation to the PUB Panel at the hearings. (Slide 123 of MH-95)

The expected value impacts of moving to 2013 assumptions from 2012 (which is what this chart depicts) are zero for energy prices and discount rates. In using this zero estimate, LCA is stating that there has been no update from MH to the probabilistic distribution of the energy prices and the discount rates. Manitoba Hydro did change the reference scenario assumptions under the 2013 update in the NFAT Application without any discussions of a corresponding change in the probabilistic distributions from the 2012 analysis.