

1 SUBJECT:

2 Update re: Harper Analysis
3

4 REFERENCE:

5
6 PREAMBLE:

7 Simpson Risk - pages 5-6
8

9 QUESTION:

10 Please provide revised Figures 1 and 2 that reflect the results of the revised
11 economic analysis in the submission of Mr. Harper. Please also provide a version
12 that is revised for Mr. Harper's calculations in respect of the various Pathways re:
13 optionality.
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16 RESPONSE:

17 In response to the first question, please see the Attached Word file.
18

19 We will be seeking to clarify the intent of the second part of the question with
20 MIPUG.

Figures 1(ECS) and 2(ECS) below illustrate that the comparisons involving a lower discount rate favour plans with Keeyask followed by Gas in 2024/25 (plans 4 and 5) over the preferred development plan (14). Indeed, plan 4 clearly dominates plan 14 with an equivalent expected return but a must lower risk, whether measured for both downside risk and upside potential (Fig. 1(ECS)) or just downside risk (Fig. 2(ECS)).

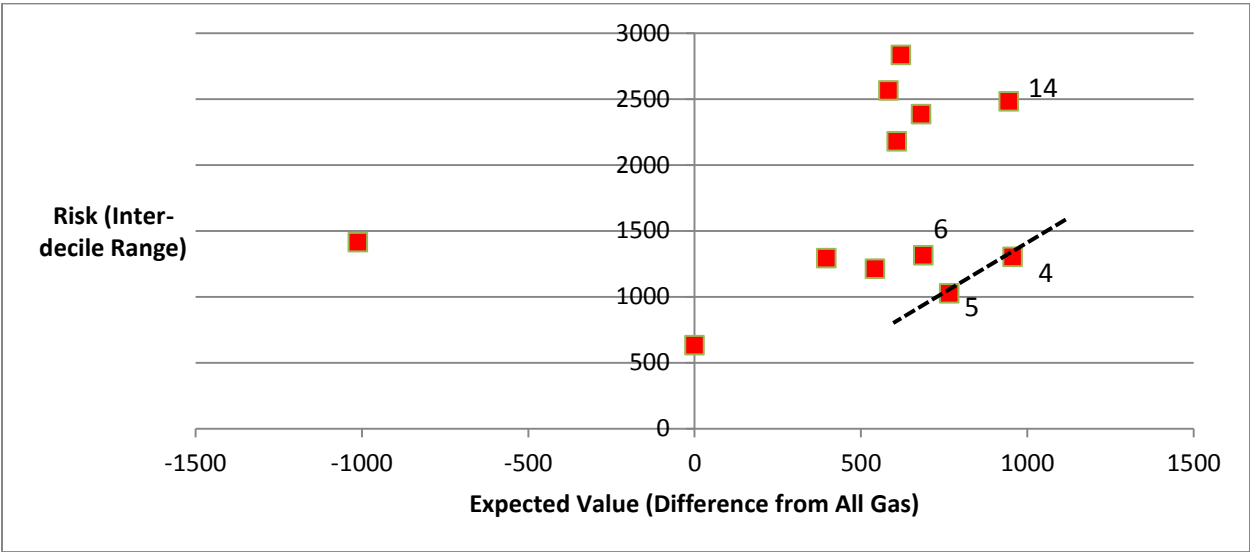


Figure 1(ECS): Risk [(P90-P10)/2] vs. Return from ECS Table#7 of Harper/ECS Report

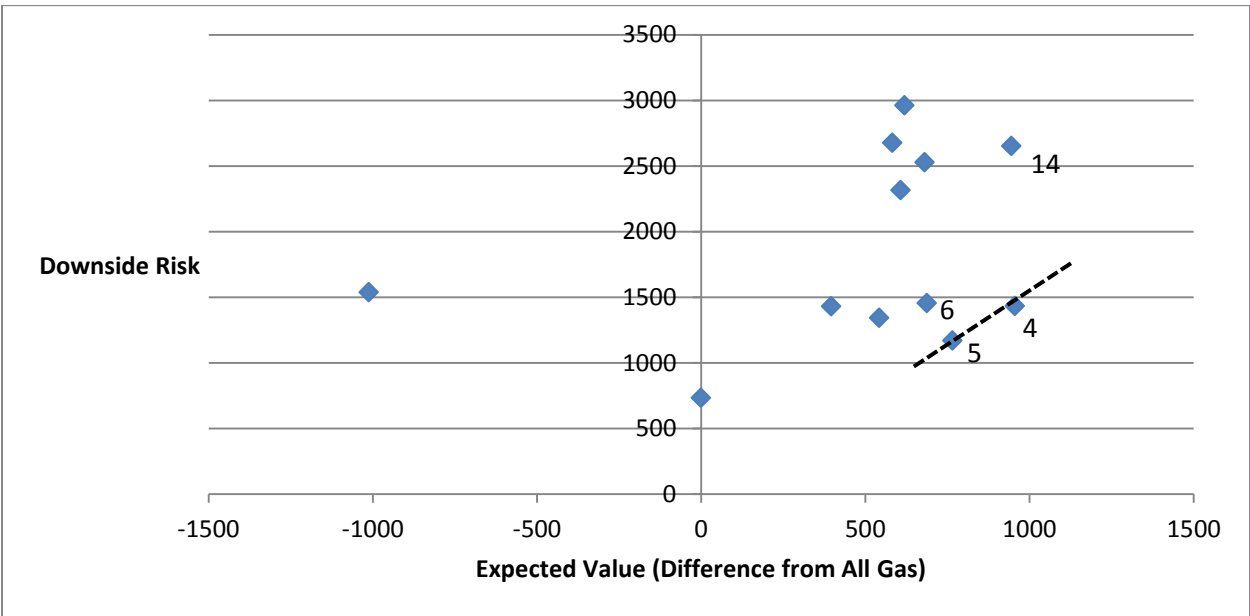


Figure 2(ECS): Downside Risk vs. Return from ECS Table#7 of Harper/ECS Report

Source: ECS Table#7 of ECS(Harper) Report

Plan#	1	7	2	4	13	11	12	15	6	5	14	3
EV Diff	0	396	543	956	583	608	681	620	688	766	945	-1012
P90	531	1548	1623	2128	3035	2647	2919	3323	1862	1646	3257	280
P10	-732	-1035	-800	-477	-2092	-1708	-1847	-2341	-767	-403	-1706	-2549
Risk1 (IDR)	631.5	1291.5	1211.5	1302.5	2563.5	2177.5	2383	2832	1314.5	1024.5	2481.5	1414.5
Risk2 (DR)	732	1431	1343	1433	2675	2316	2528	2961	1455	1169	2651	1537