Cost Benefit Analysis of switching options for New Zealand Gas industry

Response to GIC Consultation Paper

Submission to
Gas Industry Company Limited
by
Powerco Limited

March 2006

Cost benefit analysis of switching options for the Gas Industry

Introduction
This submission is in response to the Gas Industry Company's (GIC's) consultation paper, which presented a cost benefit analysis of options for gas industry switching (Consultation paper dated 16 March 2006).

The GIC sought comments on three specific questions[1]. Powerco's comments are set out in summary form immediately below. These are followed by additional comments.

Powerco would be pleased to discuss this submission with the GIC.

Response to GIC questions:

Question	Comment
Q1: Do you agree with the methodology applied by CRA International in determining the relevant costs and benefit options previously consulted on?	We disagree - the methodology applied is not robust – refer to comments on this question below.
Q2: Do you agree with the identification and quantification of costs and benefits of switching arrangements contained within CRA International's report?	We disagree – The benefits assigned to options 3 & 4 are materially overstated – refer to comments below.
Q3: Are there any other factors you are aware of that should be taken into account in assessing the costs and benefits of the preferred option.	Yes – refer to comments below.

Further comments

Question one - Applied cost/benefit methodology

The mixing and matching of the various components will cause significant discrepancies in the results. One of the main determinants with any Net Present Value (NPV) calculation is the timing of the cash flows. The NPV analysis should be undertaken for each of the software developers and their associated costs. The reason for this is that whilst some developers may have a minimal up front cost the ongoing annual costs may be significantly higher than another developer who has higher up front costs. *(See Appendix for example reworking of the NPV analysis).*

The application of the distributor cost of capital for this analysis is inappropriate. Effectively the registry is to facilitate the switching of consumers. A retailing function

---

[1] Cost Benefit Analysis of Options for Switching Arrangements in the New Zealand Gas Industry – Appendix A (p6).

and as such the correct discount rate should be the retailers weighted average cost of capital.

The applied WACC of 7.9% is inappropriate. Most of the costs and benefits for Options 3 & 4 lie with gas retailing; the correct WACC is that for gas retailing and is above the upper bound of the range of sensitivities applied in the report. However as shown by the report analysis this does not impact materially on the end result given the short timeframe of the project but it is nevertheless important that the applied WACC is representative of the investors required rate of return requirements.

Question two – Identification and quantification of Costs & benefits

Not withstanding the report comments in regards to the costs and benefits of Option 2, it would seem that the analysis is further flawed given that the industry is already working on the allocation and reconciliation arrangements. The report advises a number of issues are resolved with Option 2. Therefore the cost savings figure should be adjusted to take account of these changes, as they will reduce these cost savings significantly below the projects current assessment level thus significantly affecting the viability of Options 3 and 4. Given that this is one of the major determinants of the projects viability it is important that this figure is as accurate as possible. The level of benefits should to be adjusted before any further work is contemplated.

The variance in the developers' costs is further concern. The range in the estimates of benefits and costs is large and this points to a need for considerable caution in inferring an overall satisfactory net position might exist. Further work is needed before an investment grade decision could be contemplated. To improve the accuracy of costs and benefits the registry project need to be reliably scoped, to a RFP quality standard and quotations obtained.

The level of benefits is overstated, as a significant portion is attributable to Option 2. Thus for Options 3 & 4 only the incremental benefits attributable to those specific options should be counted. These benefits could lie around only 50% of the level suggested.

Set out below is a table showing the results of applying the corrections discussed in this submission.
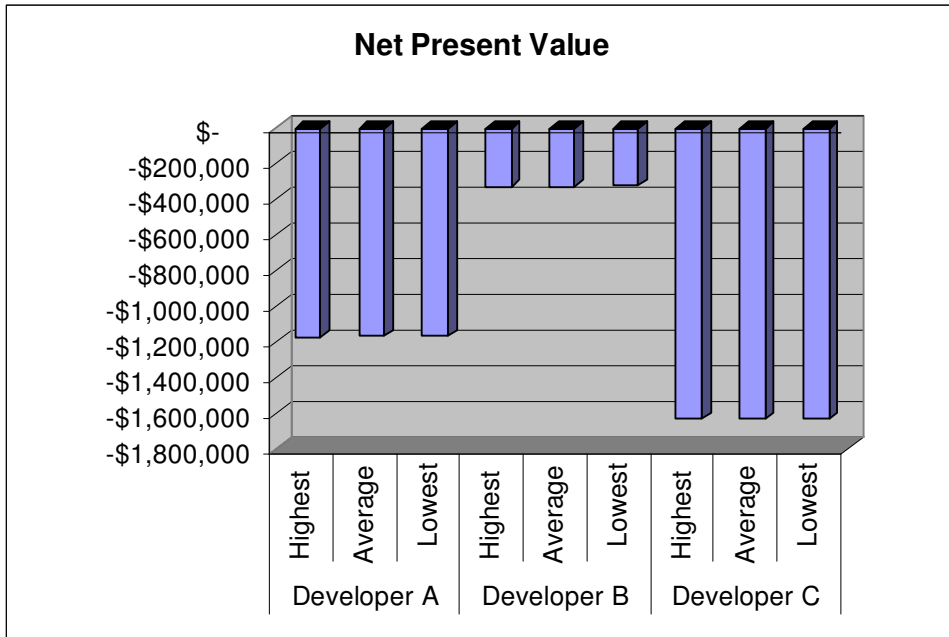
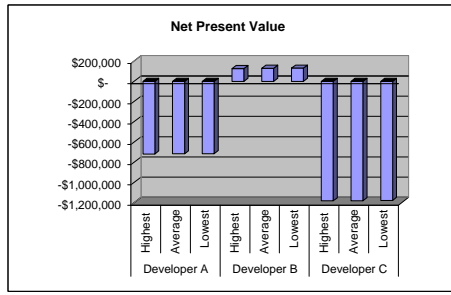**Net Present Value**

Question three – Other factors

Powerco disagrees with the comment "operation of the central registry software could lie towards the lower end of the range, and, in this case, the present value of the benefits would lie towards the maximum of the range." for the reasons outlined above. Also given that the electricity registry development cost was $507,000 we would envisage a very similar figure given that the complexities and desired results of the gas registry are the same functionally and ease of operation.

Powerco's preferred registry choice continues to be Option 2 (Reconciliation Code enhancements). In Powerco's opinion this option delivers the greatest benefit for the lowest cost. As an industry we must ensure that we make the right decision for the right reasons. If the centralized registry project does not meet the financial criteria then there needs to be demonstrable and overwhelming qualitative reasons for undertaking it. The industry needs to have rigorous debate and robust analysis to ensure the correct long-term options are undertaken for the benefit of all stakeholders.

If a consensus is reached once the necessary changes to the cost/benefit analysis are made, it is suggested that the next activity would be to put in place funding arrangements for the next phase, which would entail the development of proposals to RFP standard.

Results

	Discount rate say		14%

	Data Cleansing Cost	Switching cost savings	NPV
Highest	60,000	282,000	$ 908,129
Average	41,000	277,000	$ 909,963
Lowest	22,000	272,000	$ 911,798

	Registry development	Registry ongoing	NPV
Developer A	1,500,000	36,840	-$ 1,626,475
Developer B	375,000	118,420	-$ 781,545
Developer C	29,000	600,000	-$ 2,088,849
Developer D - av	202,000	118,420	-$ 608,545

Developer A	Highest	-$	718,346
	Average	-$	716,511
	Lowest	-$	714,677
Developer B	Highest	$	126,583
	Average	$	128,418
	Lowest	$	130,253
Developer C	Highest	-$	1,180,720
	Average	-$	1,178,885
	Lowest	-$	1,177,051
Developer D - av	Highest	$	299,583
	Average	$	301,418
	Lowest	$	303,253

Net Present Value

Chart axis: $200,000 / $- / -$200,000 / -$400,000 / -$600,000 / -$800,000 / -$1,000,000 / -$1,200,000

Categories: Highest, Average, Lowest (Developer A); Highest, Average, Lowest (Developer B); Highest, Average, Lowest (Developer C)

Discount rate	14%		Data Cleansing		41000	
Registry development	1500000		Switching cost savings		277000	
Registry ongoing	36840					

Cost/Benefit	0	1	2	3	4	5
Switching cost savings	$ -	$ -	$ -	$ -	$ -	$ -
Data cleansing and migration	-1500000					
Registry development						
Registry ongoing	0	-36840	-36840	-36840	-36840	-36840
Net benefits	-$ 1,500,000	-$ 36,840	-$ 36,840	-$ 36,840	-$ 36,840	-$ 36,840
Present Value of net benefits	-$ 1,626,475					

Discount rate	14%
Registry development	375000
Registry ongoing	118420

Cost/Benefit	0	1	2	3	4	5
Switching cost savings	$ -	$ -	$ -	$ -	$ -	$ -
Data cleansing and migration	0					
Registry development	-375000					
Registry ongoing	0	-118420	-118420	-118420	-118420	-118420
Net benefits	-$ 375,000	-$ 118,420	-$ 118,420	-$ 118,420	-$ 118,420	-$ 118,420
Present Value of net benefits	-$ 781,545					

Discount rate	14%
Registry development	29000
Registry ongoing	600000

Cost/Benefit	0	1	2	3	4	5
Switching cost savings	$ -	$ -	$ -	$ -	$ -	$ -
Data cleansing and migration	0					
Registry development	-29000					
Registry ongoing	0	-600000	-600000	-600000	-600000	-600000
Net benefits	-$ 29,000	-$ 600,000	-$ 600,000	-$ 600,000	-$ 600,000	-$ 600,000
Present Value of net benefits	-$ 2,088,849					

Discount rate	14%
Registry development	202000
Registry ongoing	118420

Cost/Benefit	0	1	2	3	4	5
Switching cost savings	$ -	$ -	$ -	$ -	$ -	$ -
Data cleansing and migration	0					
Registry development	-202000					
Registry ongoing	0	-118420	-118420	-118420	-118420	-118420
Net benefits	-$ 202,000	-$ 118,420	-$ 118,420	-$ 118,420	-$ 118,420	-$ 118,420
Present Value of net benefits	-$ 608,545					

Discount rate	14%		Data Cleansing		41000	22000	60000	-
Registry development			Switching cost savings		277000	272000	282000	-
Registry ongoing								

Cost/Benefit	0	1	2	3	4	5
Switching cost savings	$ -	$ 277,000	$ 277,000	$ 277,000	$ 277,000	$ 277,000
Data cleansing and migration	-41000					
Registry development	0					
Registry ongoing	0	0	0	0	0	0
Net benefits	-$ 41,000	$ 277,000	$ 277,000	$ 277,000	$ 277,000	$ 277,000
Present Value of net benefits	$ 909,963					

Discount rate	14%
Registry development	
Registry ongoing	

Cost/Benefit	0	1	2	3	4	5
Switching cost savings	$ -	$ 272,000	$ 272,000	$ 272,000	$ 272,000	$ 272,000
Data cleansing and migration	-22000					
Registry development	0					
Registry ongoing	0	0	0	0	0	0
Net benefits	-$ 22,000	$ 272,000	$ 272,000	$ 272,000	$ 272,000	$ 272,000
Present Value of net benefits	$ 911,798					

Discount rate	14%
Registry development	
Registry ongoing	

Cost/Benefit	0	1	2	3	4	5
Switching cost savings	$ -	$ 282,000	$ 282,000	$ 282,000	$ 282,000	$ 282,000
Data cleansing and migration	-60000					
Registry development	0					
Registry ongoing	0	0	0	0	0	0
Net benefits	-$ 60,000	$ 282,000	$ 282,000	$ 282,000	$ 282,000	$ 282,000
Present Value of net benefits	$ 908,129					

Discount rate	14%
Registry development	
Registry ongoing	

Cost/Benefit	0	1	2	3	4	5
Switching cost savings	$ -	$ -	$ -	$ -	$ -	$ -
Data cleansing and migration	-					
Registry development	0					
Registry ongoing	0	0	0	0	0	0
Net benefits	$ -	$ -	$ -	$ -	$ -	$ -
Present Value of net benefits	$ -					