

## Valuation of an Independent Gas Network Business, Confidential Client

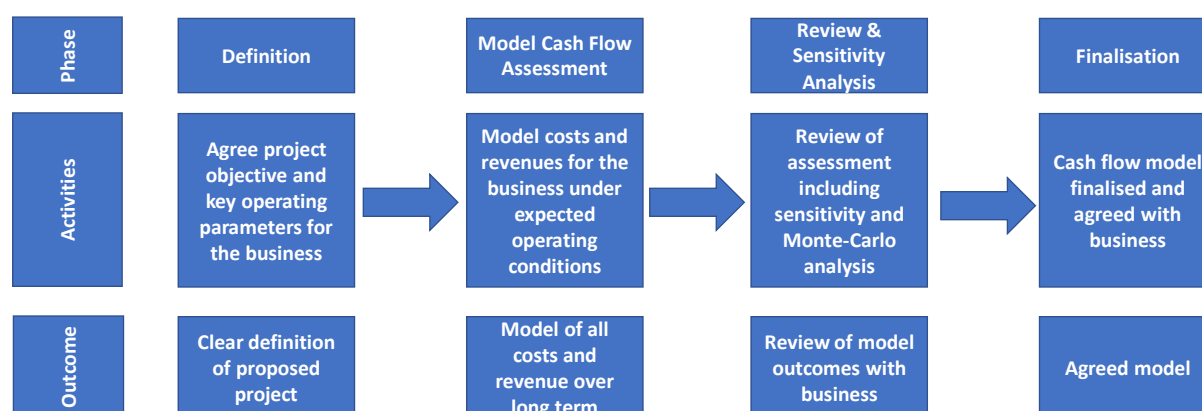
### Project Objectives

DGA Consulting assisted an independent gas network company to build a model to show the value of the business under several growth scenarios. This was intended to assist with valuation discussions and to help determine strategies for future operation. Key elements to assess under the different scenarios included:

- Quantity of gas distributed;
- Costs for the business;
- Revenue for the business; and
- Relationship between marketing investment and company performance.

### Overview of Project Approach

DGA Consulting's approach was to take inputs from the network business to develop a transparent model of how costs and benefits evolve over time and the impact on the business of various levels of growth. There were several steps in the process as shown in the diagram below:



The key outputs of the model were

- Summary Statistics
- Cashflow Implications
- Sensitivity Analysis

The outputs discussed below are illustrative and are not based on real data. However, they illustrate the range of assessments undertaken and the benefits of the DGA Consulting modelling.

### Summary Statistics

The first area of analysis was the summary results that were set up to show key calculations relevant to the value of the business.

This is shown in the tables opposite/below and considered

Volumes of Gas Sold	Quantity GJ	Year 20 Volume	
Residential Customers	9,449,144	238,653	
Non Residential Customers	933,403	23,865	
<b>Total Volume of Gas Sold</b>	<b>10,382,547</b>	<b>262,518</b>	

Revenue by Customer Type	Present Value	Year 20 PV	Year 20 Nominal
Revenue from Residential Customers	\$ 65,499,764	\$ 2,100,463	\$ 5,450,482
Revenue from Non Residential Customers	\$ 5,952,386	\$ 198,214	\$ 514,347
<b>Total Revenue</b>	<b>\$ 71,452,150</b>	<b>\$ 2,298,677</b>	<b>\$ 5,964,829</b>

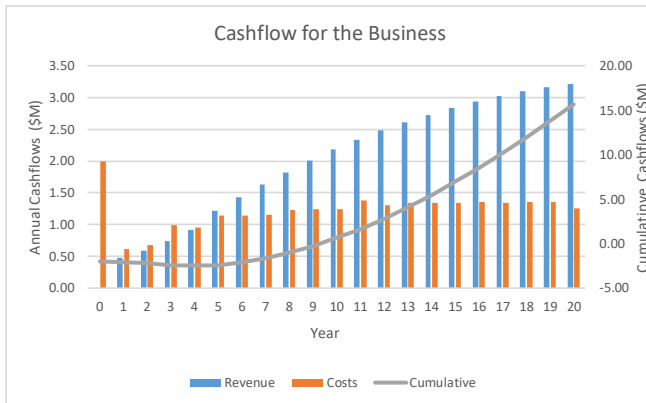
NPV over 50 years as well as understanding the profitability of the business in Year 20.

A key decision in the modelling was the assessment period for the valuation as the relatively low real discount rate increased the present value

Costs to Build and Operate Network	Present Value	Year 20 PV	Year 20 Nominal
O&M Costs (Includes Meter Replacement)	\$ 12,308,009	\$ 259,685	\$ 673,716
Marketing Campaign	\$ 5,541,097	\$ 129,752	\$ 335,000
Capital Cost (net of developer contribution)	\$ 7,176,563	\$ 128,127	\$ 330,400
Initial Capex Investment	\$ 1,600,000		
Tax	\$ 24,266,945	\$ 736,880	\$ 1,913,232
<b>Total Cost</b>	<b>\$ 50,892,614</b>	<b>\$ 1,254,444</b>	<b>\$ 3,252,348</b>
Net Position	\$ 62,540,996	\$ 1,957,369	\$ 5,081,916

of cashflows a long time in the future. Two options were considered of either a long-time assessment period of 50 years (shown in results below) or a horizon value to calculate the on-going revenue stream of the business. These produced broadly similar outcomes.

### Cashflow Implications

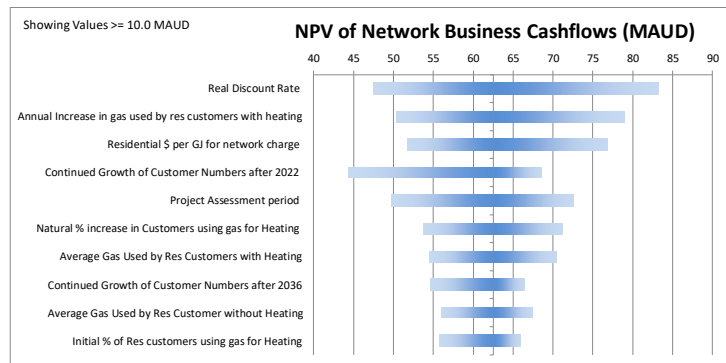


The business starts with a negative cashflow as there is a relatively small number of customers for high fixed cost as well as a significant initial investment.

As the business grows there is the opportunity to gain additional annual revenue from each customer with only a minor increase in variable costs. In this example it creates a positive cashflows from year 4 and break-even from year 9.

### Sensitivity Analysis

The modelling recognised that there was uncertainty around several key parameters including gas consumption, heating take-up rate, customer numbers and the discount rate. To test this uncertainty all key parameters were set up with a most likely value and a high/low range. Two forms of sensitivity analysis were undertaken.



The first approach assessed the impact on the modelling results from changing a single key parameter from its most likely to a high/low extreme. This showed the most important parameter was the real discount rate.

The second analysis was a Monte-Carlo simulation to predict the range of potential outcomes with an illustrative example shown opposite highlighting that 73% of the outcomes result in a NPV above \$50m.

