

Gross Return on Investment

A simple method of evaluating the financial worth of a project is the gross rate of return on the total capital investment, before any interest charges, depreciation or taxes. The gross return of the proposed gasification project for Alternative #1, operating at the full capacity, is summarised in Table 9.1.Alt.

Table 9.1Alt – Projected Gross Return on Plant Investment-Alt

Item	Amount \$CAD
Total net annual revenues	\$8,408,000
Total annual operating cost	\$3,156,000
Gross annual operating profit	\$5,252,000
Total capital investment	\$54,000,000
Gross rate of return	9.7%

The projected gross return indicates a payback period of 10 ½ years for the total capital investment for the gasification plant. By normal industry expectations, this payback period indicates that this project is not attractive from a financial prospective.

The projected cash flow, using the most favourable values for the cost variables, for a typical year and returns over the 20 –year analysis period, are shown in Table 9.2.Alt.

Table 9.2Alt - Typical (Year 10) Gasification Plant Projected Cash Flow Statement – 70 / 30 Debt to Equity-Alt

	\$/a
Revenues	\$8,408,000
Operating cost	\$3,156,000
Cash from operations	\$5,252,000
Interest payment	\$811,000
Income tax paid	\$1,114,000
Capital reinvestment	0
Debt payment	\$2,704,000
Net cash flow	\$623,000
Real return on equity (ROE)	3.43%
Real NPV	-\$3,564,000

The projected net present value (NPV) is negative in the 70/30 debt/equity case. The projected real rate of return on equity (ROE) for the proposed new gasification plant is 3.43%

If BC Hydro was to purchase the electricity at 4 cents over the cost of natural gas the NPV increases to \$5.1 million and the real ROE increases to 7.2%.

The complete cash flow projections, over the 20-year analysis period, are presented in Appendix J.