

Appendix D - Economic Analysis

The analysis used for projects G10 and G12 was conducted using Excel spreadsheet calculations. The following indicators of economic performance were computed:

- Repayment time (years from in service date)
- Net Present Value
- Benefit to Cost Ratio

The basic economic assumptions used were as follows:

Discount Rate		9.00%
Inflation Rate		2.64%
BPA Financing Rate		6.75%
O&M Escalation		0.00%
BPA Rate Escalation		0.00%
O&M Actual		2.64%
BPA Rate Actual		2.64%

The high discount rate of 9% favors projects with a faster payback period. A lower discount rate would increase benefit/cost ratio for projects G10 and G12. The treasury borrowing rate of 6.75% represents recent historical BPA borrowing.

Net Present Value and Benefit to Cost were computed using a substation equipment service life of 34 years¹ since both projects G10 and G12 have major substation components.

Capital cost expenditures were distributed over the expected year of obligation over the construction period.

BPA transmission revenues were reckoned at the rate of \$1.013 \$/kW-mo (12.156 \$/kW-year).

Projects G10 and G12 assume that 75% of the load increase is transmission revenue producing. Assuming 50% revenue producing reduces the benefit to cost ratios by about 1/3.

Typical operations and maintenance costs are used.¹

¹ Annual Financial Requirements for Bonneville Power Administration Transmission System and revised Operation and Maintenance Tables, Larry Davidson, March 31, 2000.