

**Overlapping Environmental Jurisdictions
Estimation of Economic Costs Associated with
Regulatory Delay**

by

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Executive Summary

This report describes the results of a study conducted for Alberta Environmental Protection by the Macleod Institute for Environmental Analysis at the University of Calgary. The study has determined an order-of-magnitude estimate of costs to industry that might result from regulatory delays.

1. The study arises out of a previous survey which evaluated industry perceptions in Alberta of the extent and costs of federal-provincial overlap in environmental regulation. One of the key findings of the survey was that the risk associated with "...project delays is the primary concern of respondents in the areas of project approvals and environmental assessments. Delay costs may involve out of pocket expenses if construction schedules cannot be met. Much more significant, however, are costs associated with deferred or cancelled production, foregone earnings, disruption to customers, lost market opportunities, and interest on borrowed money."
2. A simulation model has been developed to estimate the impact of delays on project start-up. Past and current cases were examined and financial data was collected from information available in public documents such as applications filed for regulatory approvals, corporate annual reports and financial market reports. For the purposes of simplicity a number of assumptions were adopted. The model incorporates a number of variables, including debt/equity ratios, interest rates on debt financing, rates of return on equity, estimated annual decline rates, estimated project cash inflows, estimated operating costs and seasonal delays. Sensitivity tests were run to determine the significance, whether positive or negative, of each variable in the model.
3. The Simulation model was used to develop five hypothetical cases using values taken from actual case studies and publicly available reports. For each case, four scenarios are shown to illustrate regulatory delays of 6 months, 9 months, 1 year and 1.5 years respectively plus a 3 month seasonal delay. The results are attached as Appendix 1.

4. The results garnered from the simulation model demonstrate that the costs associated with regulatory delay can indeed be substantial. **For example, the costs of delay range from \$38 million to \$110 million for a \$240 million project** (financed with a debt/equity ratio of 50/50 at 9% on debt and a 15% rate of return on equity) for delays between 6 months and 1.5 years.
5. The study looks at estimating costs associated with project delay that are not anticipated by a corporation which has already made the decision to proceed with a project. Provided that time lines can be reasonably predicted, a corporation's decision to proceed (or not) will of course have factored in the estimated length of time that will elapse before the corporation earns a return on its investment. If time lines cannot be reasonably predicted, if uncertainty is too great a factor, or if time lines are felt to be unreasonably long, corporations may well decide to invest elsewhere.
6. The biggest financial impact will be felt in the early months of a projects delay. Financiers and investors look at actual cash flows discounted to their present value. The value of money over time is a key consideration. The present value of a 2022 dollar(26 years from now) given the cost of capital assumed in this study is a mere 11 cents.
7. The simulation model does not cover all the costs of regulatory delay. For example, the estimated costs of external consultants and lawyers currently involved in one corporation's regulatory application is said to be some \$100,000 per month. However, such costs were not included in the model because they vary from project to project and case to case and are therefore impossible to generalize.
8. The simulation model does not account for the loss of economic benefits to Alberta for the duration of the regulatory delay. One corporation in its current regulatory application has estimated that foregone income to project employees, contractors and suppliers would be in the order of \$125 million for one year of delay. A loss of benefits of that magnitude is a significant cost to any community.