

# Economic Comparison of the Alternatives for Tolling Projects

## Highlights of Tolling White Paper 6



March 2009

### Overview

Tolling has been little used in Oregon. Elected officials and the general public will want to be assured that the benefits of a tolled/priced project justify the costs. Tolling White Paper 6 focuses on how to analyze and compare tolled and non-tolled project alternatives. This paper recommends using a Benefit-Cost Analysis (BCA) to quantify and compare the benefits and costs of a project. It also discusses other tools that could be used to understand the non-quantifiable effects.

### Benefit-Cost Analysis

BCA is currently used to evaluate transportation projects and this white paper suggests that it can provide an appropriate framework for decision makers to compare the costs and benefits of tolled and non-tolled project alternatives. Typical features of a BCA include:

- A long-term comparison period (usually 20 or 30 years) is used for all alternatives.
- A “no-build” alternative is included for comparison purposes.
- Inflation is assumed when comparing benefits over time.
- Monetary values are determined for benefits and costs.
- If the benefit-cost ratio is greater than 1.0, the benefits exceed the costs.

**Typical user benefits and costs are shown below.**

#### Net User Benefits

- Net value of time saved
- Lower costs due to increased safety
- Lower vehicle operating costs

Seven technical tolling and pricing white papers were prepared for ODOT in February 2009 as a way to consider concerns and issues for Oregon to address prior to developing a tolling/pricing policy in the future.

1. Is tolling an effective means of reducing greenhouse gas emissions?
2. Where, geographically, could tolling work and under what circumstances?
3. Forecasting change – how do we incorporate tolling and pricing into our regional transportation models?
4. What are the economics of transportation system reliability?
5. How should the economic and social effects of broad applications of congestion pricing be assessed?
6. How do you determine if tolling a project is a better alternative than other non-tolled options and how would you choose between a number of tolled alternatives?
7. Are truck-only toll lanes a viable option for Oregon?

This document highlights White Paper 6 about the best method for an economic comparison of alternatives. Find all papers online and provide your comments: [www.oregon.gov/ODOT/TD/TP/Tolling\\_Background.shtml](http://www.oregon.gov/ODOT/TD/TP/Tolling_Background.shtml)

**Costs**

- Construction costs, including toll collection costs
- Annual operating costs
- Maintenance costs
- Capital rehabilitation costs

**What about non-quantifiable effects and environmental review?**

BCAs measure the economic efficiency of a project, but not other qualitative factors. Therefore, additional analyses will be required in order to understand the full range of project effects. These could include an environmental impact statement, economic impact analysis, financial analysis or other evaluations. Tolls paid by users are considered in economic impact analysis. These studies would provide information about how the project could affect jobs, wages, regional economic conditions, environmental quality, and issues of community and social importance.

**Conclusions**

Because most tolling applications would be new to Oregon, it may be appropriate to develop a sound methodological approach for comparing tolling proposals to non-tolled alternatives. BCA can be an effective means of doing this. Project affordability and potential environmental or equity effects would need to be included with a separate process.

- BCA is recommended to quantify costs and benefits. However, other tools should be used to provide a complete analysis.
- Non-quantifiable benefits and costs should be addressed as part of a parallel process.
- White paper authors recommend that ODOT develop a transparent methodology for the public to review project analyses, including BCAs, before moving forward with a decision.

**For More Information**

- Visit the Web site to read the white papers and complete a comment form:  
[www.oregon.gov/ODOT/TD/TP/Tolling\\_Background.shtml](http://www.oregon.gov/ODOT/TD/TP/Tolling_Background.shtml)
- Email: [Robert.A.Maestre@odot.state.or.us](mailto:Robert.A.Maestre@odot.state.or.us)