

# Framework for assessing costs and benefits of decisions

The degree of uncertainty over carbon prices challenges typical models and assumptions for making investment decisions where a future cost on carbon is a significant consideration.

This section provides standardised assumptions and other guidance when undertaking cost benefit analysis for carbon-related investment decisions.

## Key issues covered are:

- the discount rate to apply for future costs and benefits of carbon
- carbon price assumptions
- scenarios to be modelled
- treatment of implications beyond the Council for cost benefit analysis.
- relationship to other relevant policies and plans

### Discount rates

The selection of discount rates is one of the most critical assumptions when undertaking discount cashflow analysis as part of any assessment of investment opportunities. Where future cashflows (either incomes or costs) depend on an ongoing carbon price, the uncertainty associated with that future price should be reflected in the discount rate used.

Higher discount rates reduce the net present value of future incomes or costs. As a general rule the more uncertain a cost or benefit is, the higher that cost or benefit should be discounted.

Given the uncertainty over the future of carbon pricing, a premium will be applied to Council's normal discount rates when assessing cashflows dependant on a future price of carbon.

### Carbon price assumptions

The New Zealand Treasury publishes regular updates of the carbon price used to calculate New Zealand's position under the Kyoto Protocol, as reported in the financial statements of the Government of New Zealand.

Where the Treasury continues to publish such information, the most recent relevant carbon price published by the Treasury will be used

in all "base-case" scenarios for financial analysis. Where Treasury does not publish this information, Council officers, using the best market information available, will develop carbon price estimates to be used in financial analysis.

Future carbon prices for "base-case" scenarios will be assumed to be the current carbon price, unless there are exceptional circumstances to modify the current carbon price.

### Scenarios to be modelled

All analysis of investment proposals should include scenarios in which future carbon prices are significantly higher (twice) and lower (half) than the current carbon price.

One scenario should also analyse a carbon price of zero in the mid-term (five years from present) to assess the implications of an investment where there are no costs or benefits arising from carbon pricing beyond five years.

### Treatment of implications beyond the Council for cost benefit analysis

For some of its activities and services, the Council might be in a position to fully pass on costs of emissions liabilities without loss of competitive advantage. However, in some cases simply passing on costs may be economically inefficient and detrimental overall to Wellington ratepayers compared to investing in technologies to reduce emissions.

The Council will take a broader view of costs and benefits into consideration when assessing investment opportunities and will make decisions in the overall interests of Wellingtonians.

This may mean investing in new technologies rather than simply passing on cost increases.

All analysis should, nonetheless, still identify where costs and benefits lie, including financial implications for the Council.

In some cases analysis may include a hypothetical scenario in which the effect on fees or rates is estimated in the absence of the Council investment in a certain technology or service.

### Relationship to other relevant policies and plans

All analysis of investment proposals must consider and assess consistency with other relevant policies and plans. This will be particularly relevant to decisions affecting the management of regenerating or established indigenous forest.