Modelling – Checklist

This checklist has been prepared for applicants undertaking economic and financial analysis to support their request for funding for waste and recycling infrastructure under programs being operated by the NSW Environment Protection Authority or NSW Environmental Trust.

What is the difference between economic and financial analysis?

Economic Analysis (cost-benefit analysis): The economic analysis checks whether the project results in a net public benefit for NSW. Economic appraisal is a systematic means of analysing all the costs and benefits of various options to achieve a particular service objective. The economic analysis is typically framed from the perspective of the whole community.

Financial Analysis: A financial appraisal is used to evaluate the financial viability of a proposed project. The financial analysis is typically framed from the perspective of the entity carrying out the project.

Economic analysis

Key aspects of the modelling

Discount rates	4%, 7% and 10%
Costs (project + broader community)	1. Capital: new and replacement infrastructure 2. Operating: staff, energy, maintenance, licensing, etc 3. Community: traffic, noise, dust, etc
Benefits (project + broader community)	1. Avoided costs/savings – e.g. gate fees for landfill disposal 2. Revenue: from sale of recovered materials (by product type), energy generation 3. Other benefits – amenity, greenhouse gas abatement, leachate, etc

Common mistakes to avoid:

1. Optimism bias – Check for optimism biases in the assumptions, such as high growth in throughput, under-valued costs and over-valued benefits

2. Financial values – Make sure that only economic values are used in the analysis. For instance, do not include:
    - revenue from gate fees as a benefit as this is a financial revenue stream not an economic benefit.
    - levies and taxes or other transfer payments in the calculations. (e.g where avoided landfill costs are included as a benefit, the rate used must exclude levies and taxes.)
3. Nominal values – Make sure that all costs and benefit are in **real** dollars. Real values should be set to the base year and there should be no inflation in out years. There must not be any inflation in the model.

For further information on cost-benefit analysis refer to the NSW Government Guide for Cost-Benefit Analysis (TPP17-03).

Financial analysis

Key aspects of the modelling

Discount rates	Weighted average cost of capital for the applicant
Costs	1. Capital: new and replacement infrastructure 2. Operating: staff, energy, maintenance, licensing, etc 3. Tax (where payable)
Benefits (project + broader community)	1. Grant funding 2. Revenue: from sale of recovered materials (by product type), energy generation 3. Revenue from gate fees

Common mistakes to avoid:

1. Optimism bias – Check for optimism biases in the assumptions, such as assumed throughput, under-valued costs and over-valued benefits
2. Economic values – Make sure that only financial values are used in the analysis. For instance, do not include:
    - Non-market benefits
3. Real values – Make sure that all costs and benefit are in nominal dollars. Nominal values include inflation. This mistake commonly occurs when values are copied from the economic model to the financial model.

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For further information on financial analysis refer to the NSW Government Guidelines for Financial Appraisal (TPP07-4).