

## Application of a shadow carbon price in capital decision making

The use of a shadow carbon price by Coliban Water is an example of explicitly considering future costs of carbon in decision-making. It is expected that the approach will drive behavioural change in the business through the consideration of carbon and climate change at the beginning of the project lifecycle. In addition, the business will likely avoid 'lock-in' of high emitting technologies.

### CLIMATE THEMES ADDRESSED



NET ZERO  
EMISSION



CLIMATE  
CHANGE  
PROJECTIONS  
IN DECISION  
MAKING



DIRECTOR  
LIABILITY/TCFD

### Background

Carbon has been considered in the Multi-Criteria Analysis for over seven years at Coliban Water, however, the future costs of mitigating, or offsetting the additional carbon were excluded from the assessment.

A shadow price on carbon assists to ensure investment decisions reflect all costs to achieve Carbon Zero cost-effectively. Shadow carbon pricing is a method of investment decision analysis that adds a proxy carbon surcharge to the price of projects that involve the creation of carbon emissions.

The shadow carbon price gives an edge to options that are more emissions efficient, other things being equal, when analysing investments and other strategic opportunities. It is an explicit way to anticipate future policies relating to carbon reduction and avoid stranded or inefficiently allocated capital.

The shadow carbon price adopted by Coliban Water is derived from work completed by the IPCC during the development of the Fifth Assessment Report and the World Bank's Carbon Pricing DashBoard. It follows a pathway through three different trajectories (Central, Low and High) out to 2050. The different trajectories allow for robust sensitivity analysis using the carbon price.

### Benefits to the utility, and to climate-related outcomes

The application of a shadow carbon price highlights the impact of climate change and the potential costs of inaction. It allows for decisions to be made with visibility of future carbon costs.

The shadow carbon price is one of a number of tools that Coliban Water uses to consider carbon in decision-making processes, other tools include:

- Technical specifications and tender evaluation criteria in capital delivery
- Performance management, asset replacement and energy audits in Operations
- The use of a Marginal Abatement Cost Curve in carbon reduction projects.