

## Research Program: R1

### R1.106 – Research and Macro-Economic Support for Climate Change issues in the Rail Industry

#### Background:

Rail must have sufficient understanding of environmental and economic issues such as the use of future fuels, the possibility of further electrification, and dealing with the need for rapid technological change in the rail sector.

#### Objective:

The general aims of the project are: to understand the pre-conditions for a substantial modal shift and upgrading of Australian rail transport, especially in the context of high global fuel prices and a carbon price; to estimate the economic, social and environmental benefits arising from these two changes; and to assess the policy options, funding models and the corporate responses required for these changes to occur. The project will also prioritise issues for future research.

#### Project scope:

The project will identify areas for concern, provide timely response on these issues, and signal directions for ongoing research.

#### Benefits:

It is envisaged that the project will map out future research directions, while providing the industry with continual updates regarding climate change themes that can be used to formulate informed policy positions regarding these important issues.

#### Expected outcomes:

The project aims to provide the following deliverables:

- An analysis of the external economic and social costs and benefits of rail and road use, and hence of the benefits of a modal shift
- Descriptive analysis of the Australian transport sector, with special emphasis on modal issues, energy issues and greenhouse gas emissions
- Definition of the likely operation of an Emissions Trading System, and its impact on the transport sector
- Review of infrastructure and related issues affecting the distribution of the freight task between road and rail, and of the options for addressing them
- Review of the issues involved in passenger movements in the major cities, and of the options for major changes (including an assessment of changes in Perth)
  
- A review of recent and prospective technology developments relevant to transport, and the extent to which they could be implemented in Australia
- An analysis of the companies and agencies involved in rail transport in Australia, and of the issues and incentives they face
- Definition of policy options, and modelling of their net economic, social and environmental benefits
- Prioritisation of issues for future research

#### Project timeframe:

01/06/08 – 30/09/09

#### Project Chair:

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