Chapter 1

Introduction

1.1. A comprehensive and accessible rail transport system is an important part of the Victorian transport chain which links communities and strengthens industry.

1.2. The Victorian rail industry is facing a range of challenges similar to those being faced by rail networks in other jurisdictions in Australia and overseas. There has been, and continues to be, rapid growth in patronage on passenger services. In turn, this creates a challenge regarding how to manage this growth on routes that are already at, or nearing capacity. Additionally, while freight rail has been in decline in recent decades, both state and federal governments have provided additional funding to support the expansion of the interstate and intrastate freight networks. These factors, together with the ever-increasing expectations among customers regarding service levels and value for money, are driving transport policy directions.

1.3. A key task facing the rail industry is how to best structure and undertake its diverse operations while meeting government and community expectations for rail to achieve a range of environmental, social and economic objectives. The rail industry is facing the challenging task of addressing the disparate and competing objectives of carbon reduction, health and safety, security, social inclusion and sustainable economic growth.

1.4. The rail industry is heavily reliant on a strong safety culture, which operates within a rigorous regulatory environment. New systems of safeworking have been introduced and expanded over many decades, with the aim of improving overall safety in the rail industry.

1.5. Technology presents both an opportunity and a challenge for the rail industry. The industry needs to innovate and harness new technologies and build its capability and competence to support change. Improved safety is a powerful driver of technological advancements within the rail industry.

1.6. In undertaking this inquiry, the Education and Training Committee aims to provide directions and recommendations for industry to ensure the Victorian rail industry has the knowledge and skills required to develop and sustain world class passenger and freight rail operations.

Functions of the Education and Training Committee

1.7. The Education and Training Committee is constituted under the Parliamentary Committees Act 2003. The Committee’s specific function under the Act is to:

Inquire into, consider and report to the Parliament on any proposal, matter or thing concerned with education or training if the Committee is required or permitted to do so by or under the Act.
1.8. The Education and Training Committee comprises seven members of Parliament, with five drawn from the Legislative Assembly and two from the Legislative Council. Mr Geoff Howard MP chairs the Committee.

Terms of reference

1.9. On Thursday 4 December 2008 the Legislative Assembly referred to the Education and Training Committee an inquiry into skill shortages in the rail industry.

To the Education and Training Committee — for inquiry, consideration and report no later than 31 December 2009 on skills shortages in the rail industry — and the Committee is to explore possible solutions and, in particular, is asked to consider:

a) factors influencing recruitment and retention;

b) demographic profile of the workforce and the outlook for future retirements and loss of skills;

c) implications of the Victorian Industry and Manufacturing Statement commitment in relation to local content; and

d) whether there is any need for increased training opportunities at university and trade levels and, if so, how industry can stimulate student/user demand.

1.10. On 24 November 2009, the Legislative Assembly agreed to extend the reporting date for the inquiry until 30 April 2010.

Inquiry methodology

1.11. The terms of reference were advertised in The Age and Herald Sun on 28 February 2009 and ‘Mighty V’ Network newspapers in regional Victoria during March 2009.

1.12. In February 2009, a mail-out of approximately 240 organisations and individuals was conducted, advising them of the terms of reference and inviting written submissions. The mail-out targeted government departments and agencies, rail operators, industry associations, education and training providers, unions and other stakeholders.

1.13. The Committee received 25 written submissions to the inquiry (refer Appendix A), along with a small body of supplementary written material. Submissions came from rail companies, industry bodies, unions, education and training providers, researchers, individuals employed in the rail industry, and governments.

1.14. In commencing its inquiry, the Committee was aware of a number of recent reports of relevance to skill shortages and workforce development in the rail industry. These include:

- *The Changing Face of Rail: A journey to the employer of choice*, published by the Australasian Rail Association in 2006;

- *A Rail Revolution: Future capability identification and skills development for the Australasian rail industry*, published by the Australasian Rail Association in 2008;
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– The Transport and Logistics Industry Skills Council *Environmental Scan 2009*;

– *Workforce challenges in the transport industry*, published by the Australian Standing Committee on Employment, Workplace Relations and Education’s report; and


1.15. In May 2009, three Committee members and two members of staff attended the Rail Careers Conference in Melbourne. The Rail Careers Conference provided an opportunity for the Committee to familiarise itself with a wide range of workforce planning and development issues relevant to the rail industry.

1.16. A series of formal hearings took place in July and August 2009 and March 2010, involving 39 witnesses (refer Appendix B). Participants included representatives of the main rail operators, government departments, industry associations and unions.

1.17. In August 2009, the Committee travelled to the Newport Rail Precinct to view the Downer EDI Rail Workshops and the Rail Skills Centre and to meet with representatives of these facilities. In November 2009, the Committee visited the Automotive Centre of Excellence, located at the Docklands. The participants involved in these site visits are listed in Appendix C.

1.18. In September 2009, the Committee travelled to Queensland to conduct investigations for the inquiry.\(^1\) Queensland has a number of features that made it a useful location for investigations. In 2007, a Senate Committee inquiry identified Queensland as especially ‘proactive and collaborative’ in addressing skill shortages in the transport industry.\(^2\) In 2006, a major report for the Australasian Railway Association also identified Queensland as a leader in recruitment and retention in the rail industry. Queensland has also been the site of two Australian Government Cooperative Research Centres (CRCs) for the rail industry. Finally, Queensland is an important site for the delivery of specialist rail postgraduate degrees.

1.19. In Brisbane, the Committee met with representatives of the Industry Leaders Group, Queensland University of Technology, the CRC for Rail Innovation, QR Limited and RailCom. The Committee also visited Rockhampton, where it met with representatives of the Centre for Railway Engineering, Central Queensland University and toured QR Limited’s Rollingstock and Component Services Workshop. Individuals involved in these investigations are listed in Appendix D.

1.20. In September 2009, a staff member attended the Railways Technical Society of Australasia’s inaugural Meet the Railway People Expo. Aimed at undergraduate students, the expo highlighted career opportunities in the rail industry, and provided a forum for networking. The expo further developed the Committee’s understanding of rail industry careers.

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\(^1\) During these investigations, the Committee also conducted meetings in relation to its other inquiry, the inquiry into developing opportunities for schools to become a focus for healthy community living.

\(^2\) Senate Standing Committee on Employment, Workplace Relations and Education, *Workforce challenges in the transport industry* (Canberra: Commonwealth of Australia, 2007), 27.
1.21. The Committee also met with representatives of KiwiRail and Competenz in New Zealand in October 2009 (refer Appendix E).3

The Australian rail industry

1.22. The rail industry is a significant contributor to Australia’s metropolitan, regional, rural and remote economies, providing economic benefits worth around $7.7 billion each year.4 The industry employs over 100,000 staff in 150 organisations in a wide range of occupations—from train drivers and station staff to apprentices and tradespeople, engineers and safety officers, and human resources, finance and management professionals.5

1.23. The Australian rail industry has $30 billion of future investment planned. It facilitates over 670 million train trips each year and moves over 660 million tonnes of freight across the country. The industry ensures that 41,000 kilometres of track, over 1,800 locomotives and 32,000 wagons and carriages are available and maintained in working order.6

1.24. The Australian Railway Industry Corporation has defined the industry in terms of five discrete segments: railway management, consulting and engineering services; all forms of rolling stock and their components; track construction and maintenance and specialised equipment; signalling, communications and electrification; and railway equipment, component repair and workshop services.7 Thus, the rail sector is made up of the following diverse stakeholder groups: track owners; rail operators; rolling stock manufacture and maintenance organisations; signals and communications manufacture and maintenance organisations; general product and service suppliers; research (technical and non-technical) organisations; education and training organisations; industry, professional and employee associations; customers (freight and passengers); government departments and agencies; and other organisations.

1.25. Although this inquiry focuses on skill shortages in the Victorian rail industry, it is important to understand the broader context in which the industry operates. Nationally and internationally, the rail industry is in a period of expansion—patronage, revenues and investments in infrastructure have been increasing and are expected to continue to grow. Worldwide, the industry has experienced significant organisational change due to both privatisation and increased competition as part of competition reform undertaken by governments.8

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3 The Committee travelled to New Zealand in October 2009 primarily to conduct investigations associated with its inquiry into developing opportunities for schools to become a focus for healthy community living.
5 ibid.
6 ibid.
1.26. Over many years, Australia’s rail industry has developed specialised expertise and acquired extensive experience in all aspects of the design, development, construction, operation, maintenance and refurbishment of modern rail systems. The industry’s engineers have a record of achievement, particularly in heavy haul networks in remote locations and hostile environments.9

1.27. Through its research and development activities, the Australian rail industry has achieved a range of collaborative breakthroughs. These include wheel–rail interface developments (particularly wheel grinding techniques trialled throughout Australia and Hong Kong), ultrasonic and stress testing in rails, computer simulations (particularly train path simulations), signalling for automatic train protection and control systems, and head hardened rail to lengthen the life of heavily loaded rails.10 Australian technical innovations include the development and introduction of: high-speed bogie design for passenger and freight trains; computer information technology for rail signalling, ticketing and training; cost control and planning systems; dry brake fuelling systems; pollution control environmental systems: carriage cleaning systems; simulators for driver training and train operating; and optical techniques for monitoring rail conditions and measuring rail head wear.11

1.28. Australia also has a range of consultancy skills specific to the rail industry. These include feasibility reviews, route surveys, planning, detailed design, project management, estimating, financial analysis of options, infrastructure reviews, passenger reservation systems and information technology. Australian railway consultants have utilised these skills on projects here and overseas. These include transport planning in Eastern Europe and Asia, benchmarking in Hong Kong and the United Kingdom, train simulation, signal planning and supervision, and various privatisation projects in Australia.12

1.29. Australia has a manufacturing base supporting the rail industry, including several rolling stock manufacturers experienced in the design of short and medium runs of customised locomotives, a full range of freight wagons, passenger coaches, and double and single-deck electric and diesel multiple units. The industry could be self-sufficient in the development and supply of a wide variety of components such as cast and fabricated bogies, wheels and axles.13 The component range also includes track supplies, brake pads and blocks, pantographs, traction motors, specialised airconditioning units, centralised traffic control systems and electronic and solar powered remote area signalling.14

1.30. Competition from the international manufacturing market is increasing rapidly, with both China and India developing high volume, low cost passenger trains and freight wagons.

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10 ibid.
11 ibid.
12 ibid.
13 ibid.
14 ibid.
1.31. Worldwide, the rail industry is facing a broad range of economic, social and environmental challenges. At the same time, workforce development challenges are a particular policy focus of many employers, governments and other stakeholders in the industry.

1.32. The skilled labour market remains tight and specific areas critical to rail operations, especially engineering and technical skills, are in high demand. The Victorian rail industry is therefore competing both nationally and internationally to attract, develop and retain essential rail workers to ensure that it is able to continue to provide efficient passenger and freight services.