

Fatigue: A Union Perspective

In July 2006, the National Transport Commission (NTC)¹ released draft *Fatigue Management for Rail Safety Workers Guidelines*² for discussion. The guidelines were produced to assist industry participants (employers, unions and government rail regulators) meet new obligations arising under the National Model Rail Safety Bill. The Bill, which was endorsed by Federal and State Transport Ministers in June 2006, represented a major step in the evolution of rail safety regulation in Australia. Prior to this national approach, the various Australian States and Territories regulated rail safety independently of each other, with New South Wales being the first to legislate in this area in 1993. The development of national legislation represents one step in a long journey for the Rail Tram and Bus Union (RTBU) in addressing the issue of fatigue for rail workers.

The paper gives an overview of the RTBU's involvement in fatigue and related issues over a thirty year period in Australia. From the early approach of seeking financial compensation for the social disabilities experienced from working shift and night work, to the participation in a shiftwork consortium which assembled scientific data about the affects of fatigue on train crews, to wider societal interest based on a greater understanding of the dangers posed by fatigue to transport workers in particular and the impact of the restructuring of the Australian economy in general. Finally, the paper examines the current development of fatigue management guidelines under the auspices of the NTC.

Historically Rail Unions took an Industrial Approach to Fatigue

Prior to the 1990s, fatigue in the Australian rail industry was not a topic that attracted significant research interest. In the absence of today's scientific data, appropriate methodologies and field-testing, railway unions approached work related issues through industrial mechanisms. This was initially done through the uniquely Australian system of centralised awards - minimum conditions that were developed within a legal framework of compulsory conciliation and arbitration. Awards allowed unions and employers to have detailed legally enforceable provisions relating to the wages and conditions of employees including hours of work³.

Further to awards and collective agreements, the 8 hour working day (8 hours work, 8 hours leisure and 8 hours rest), won by Melbourne stonemasons in 1856, contributed to restrictions on hours of work and recognised the importance of non-work time. One hundred and fifty years on from that historical victory, the social dimension of working time remains a major issue determining union approaches to the pressures to extend working time to meet the operational demands and commercial pressures of the railway industry.

A practical example of how rail unions addressed hours of work prior to the 1990s is seen in the 1970's claim before the then Conciliation and Arbitration Commission for a significant increase in the payment made for the social disabilities for working night work. The claim focused on the disruption to family and social life suffered by railway shift workers. From their experiences,

¹ National Transport Commission is a body established in 2004 under an inter-governmental with a charter to develop, monitor and maintain uniform or nationally consistent regulatory and operational reforms relating to road transport, rail transport and intermodal transport. The Commonwealth Government and All States and Territories jointly fund the NTC. (From 1993 to 2004 it was the National Road Transport Commission)

² Draft Fatigue Management for Rail Safety Workers Guidelines: July 2006. Available from NTC web site www.ntc.gov.au

³ This system has undergone dramatic change over the last ten years as decentralisation of the regulation of employment increased pace and the parties to the employment relationship focused on enterprise level collective bargaining.

workers knew that both physically and psychologically they did not perform equally at all times of the day and the most difficulties were experienced with night shift. They knew, as did their families, about the problems of daytime sleep, how difficult it was and the shorter amount of sleep obtained during the day.

In the 1970s and 1980s, at the same time that unions were restricting hours of work through industrial means, human factors research began to increase in popularity. A senior official of the Australian locomotive drivers union, (AFULE) the almost indefatigable Bernie Willingale, immersed himself in this science, with the union putting together one of the most comprehensive libraries on the subject in Australia. Features of the Australian rail industry that encouraged Bernie and other officers and members of the Locomotive Division of the RTBU to spearhead a long term campaign to address possible causes of fatigue for rail workers included: the vast distances travelled by trains across the Australian continent; the continuous nature of Australian rail operations; variations affecting the timing and duration of work undertaken such as weather, and infrastructure, locomotive and rolling stock failures and, uncertainty caused by seasonal fluctuations in demand for rail transport. In addition to the fatigue effects caused by these structural features of the industry, the family and social lives of rail workers were also being disrupted by frequent periods away from home.

The late 1970s and 1980s saw far reaching changes in railway operations, manning levels and the technology used in Australian railways. Unions were keenly interested in technological change and its impact on workers. Railway unions sent delegations overseas to investigate the impacts and implications of change. The general railway union investigated changes in signalling technology, shunting yard design and practices and the changes in perway and rolling stock maintenance in a number of European countries. The locomotive union participated in a number of international rail conferences and followed closely the Japanese experiences with the high-speed trains that came into service in the early 1960s

Documents from these conferences and fact-finding missions were circulated to delegates and reports given to members. One such report⁴ described trials that were being undertaken in East Germany using biological driving safety devices including methods to register blinking, and optical control of the eyelash movement. Over twenty years later, vigilance controls were to be a central issue in the Waterfall Inquiry in New South Wales and the search continues with companies in a number of countries undertaking trials with spectacles designed to detect fatigue. The changes in railway operations in the 1970s and 1980s resulted in unions pursuing policies and programs around technology including redundancy and retraining rights for rail workers and improvements to rostering systems and conditions in the workplace.

1990's: The Shiftwork and Workload Consortium

The pace of change in the rail industry continued into the 1990s when large deficits, technological change and the need for a catch up investment program drove the push for structural change in the industry. In the early 1990s, the railway unions negotiated change with the then Australian Labor Government for the establishment of a new national rail freight organisation. The negotiations resulted in a package of investment for infrastructure modernisation, work organisation changes based on devolution of responsibility to the work place through team based structures (not the quality circle model often promoted to undermine union structures) and, changes to work practices. Significant agreed changes to industrial instruments were made by negotiation; the number of unions in the industry was reduced to two through amalgamations and inter union agreements; and, career structures became underpinned by competency-based training. Further, a sustained challenge was made to the overtime culture, which had long been a feature of the industry.

⁴ Vigilance controls: a reappraisal: a new approach. AFULE 1982.

These changes were also accompanied by demands from some rail operators for longer shift lengths. In a number of rail systems there were discussions regarding increasing maximum shift lengths to 11 and 12 hours for train crew. At the time, the union raised a deep-seated concern that 12 hour shifts on double manned freight trains would cause fatigue problems and impact detrimentally on employee's occupational health and safety, rostering and family and social life.

Between late 1993 and early 1994, a series of meetings were held between representatives of the RTBU and several State and national rail employers, the National OHS Authority (Worksafe) and the University of Adelaide's Centre for Sleep Research. A common understanding was reached on the following issues:

- That shift work was emerging as an important OHS issue;
- Historically, decisions on the health and safety risks associated with rosters and workload had not been empirically derived; and,
- Industry participants should endeavour to assess the potential impact of alternative rostering systems on the health and welfare of train crew and on the profitability of rail transport.

As a result of these meetings, a consortium was established between the RTBU, key rail employers, Worksafe and the University researchers. A work program was agreed that was based on:

- The development and validation of field-based measures of the impact of specific roster systems and workload on drivers' health and safety.
- The development and validation of an educational initiative to improve organisational awareness of the impact of shift work on all aspects of the rail industry.

The early strength of the consortium was the collaboration between the Union and the 250 locomotive driver members (with family participation encouraged) from 14 depots who participated in the initial research project with researchers from the University, four rail companies and the Commonwealth OHS Authority, Worksafe. The outcomes of that two-year project were⁵:

- A comprehensive suite of competency based training and educational materials, which included a video, a booklet, a self-paced workbook, a 600 page-training manual targeted at OHS officers and an interactive web site containing all the written materials; and,
- A software program (called FAID) predicting the work related fatigue associated with specific rosters was developed using the data obtained in the field studies.

The study identified significant determinants of work related fatigue as being timing and duration of shifts and breaks, work history in the preceding seven days and the biological limits on recovery sleep. Major findings included:

- Despite having vastly different work schedules and personal attributes drivers at all 14 depots had remarkably similar sleep patterns;
- Drivers obtained most of their sleep during the night and very little during the day;
- Existing minimum break regulations were too simplistic and should incorporate time of day effects;
- Time of day had a far greater influence on alertness and performance than sleep length, shift duration and prior wakefulness. Alertness was likely to be low during early morning shifts irrespective of these other factors and this had obvious OHS implications; and,
- Train crew did not physiologically adapt to their irregular work schedules.

⁵ Australian Railways Shiftwork and Workload Study-Phase One Final Report. Centre for Sleep Research: University of South Australia 1999.

The outcomes of the first study provided the basis for a Shiftwork and Workload Phase 2⁶. The aims of the project were:

- Further assess the data obtained in Phase 1;
- To evaluate, assess and review the training and education program and fatigue management systems introduced by consortium members;
- To further validate the fatigue management index using train driving simulators; and,
- To design and assess dynamic rosters.

The workload of the second phase was designed to capture rail industry restructuring and privatisation, together with the policies of a conservative federal government. The impact of the conservative government was felt immediately as the participation of Worksafe did not continue into Phase 2 and the then recently privatised rail companies were not initial participants. The consortium was required to fund itself independently and it was at the start of Phase 2 that the seeds were sown for the consortium to struggle to maintain its program of ground breaking research and the collaborative enthusiasm that had been initially engendered.

Over time, union members began to raise concerns about the simplistic use of the fatigue management index (FAID) by a number of rail companies. This misuse negatively impacted on workload, fatigue and the non-working lives of rail workers. A perception developed within the Union that the fatigue agenda was being management driven. This was evidenced by a waning in the initial enthusiasm and support from rail CEO's whose focus had narrowed to simply company specific projects in the post privatisation era rather than an holistic commitment to improving the industry.

In Phase 3 of the consortium, projects undertaken included:

- Reviewing methodologies aimed at assessing workload to develop evidence based approaches to risk identification and analysis;
- Validation of the fatigue management index for non-driving grades such as rail terminal operators, infrastructure workers and train controllers; and,
- A focus on fitness for duty and the evaluation of methodologies designed to measure impairment.

In late 2005, the consortium ceased for financial reasons that owed much to the decreasing number of rail companies that were prepared to commit funds to future research. Further, at the national level, current political environment was, and remains, not conducive to supporting research work aimed at addressing health and safety issues.

The impact of the Consortium

The involvement of the Centre for Sleep Research in the work of the Consortium provided a springboard for a quantum leap in the scientific understanding of fatigue, which became increasingly recognised through their studies conducted in a range of industries. Combined with extensive work being done in the road industry by other research institutes, fatigue came to be seen as an OHS issue and, a major workplace hazard. By the start of this century, the quantity and quality of fatigue research being generated in Australian universities, together with overseas developments, meant that a critical mass of understanding about fatigue had been reached which irreversibly changed the way fatigue was understood by unions, industry, governments and the community.

⁶ Australian Railways Shiftwork and Workload Study-Phase Two Final Report. (Centre for Sleep Research: University of South Australia.

The work of the Consortium has, both in theory and practice, changed the approach of the industry to the management of fatigue. In the concluding remarks of the Phase Two Report of the Consortium it was noted that *“Australian railway organisations have experienced an enormous shift in the way they view and address fatigue in the workplace and can offer much to other industries and countries in this respect”*.⁷

The Consortium had envisaged that its program would provide the basis of an integrated industry wide approach to the design, implementation and evaluation of roster systems and workload within the industry. This occurred in part, although the intense period of organisation and re-organisation, which is a feature of the Australian rail industry, affected this progress. However nationally, the application of fatigue management principles has not been consistent or uniform.

In September 2003 the RTBU conducted a survey of its members about their experiences with fatigue. The survey revealed that not all rail companies had a fatigue management policy, access to it by employees was limited in some companies, and there was little variation for operational factors taken into account when determining fatigue levels e.g. master rosters vs. actual rosters, lift up/lay back, working on rostered days off, mutual shift swaps, extended shifts and overtime in its various forms. Furthermore the depth of training in fatigue management also varied across rail companies. A number of companies did not make available the results of the application of the fatigue management index to OHS/roster committees. Even more recently, the attention given to fatigue by rail operators has been varied. In 2005 an operational business unit of one of the largest private sector rail companies did not have a fatigue management policy in place and training of employees in fatigue principles had not occurred at induction. This ignorance of fatigue management occurred in an environment of staff shortages, frequent roster changes with drivers often being asked to extend their shifts and, the working of four continuous night shifts, all actions that extended the fatigue management index beyond recommended levels.

While the Consortium was a key player in the development of knowledge around fatigue principles, it must also be recognised that a number of the important original goals of Consortium members were not realised. As suggested by the examples above, work on fatigue did not produce a consistent fatigue management regime across land transport and, despite a large effort by regulators and government, only the surface has been scratched in the road freight industry. Fatigue remains one of a number of ‘fair competition’ issues that is yet to be resolved in land transport both in Australia and internationally.

In 2005/6, the development of national rail safety legislation through a model bill and regulations represents a positive step in the application of fatigue management strategies in the Australian rail industry.

Fatigue becomes a concern to wider society

Other factors at work in the 1990's ensured that hours of work and fatigue would become an issue of concern for the wider community. Similar to other western countries, Australia was undergoing profound economic and social change due to globalisation, competition and deregulation. The structure and composition of the workforce was changing quickly, with greater hours of work for those in full time employment and not enough hours for those in less than full time employment, particularly for women.

Australian Social Trends 2006⁸ outlines the trends in hours worked, the shift to part time work and the higher proportion of workers working very long hours of work (50 hours or more per week). Thirty per cent of men in Australia in 2005 worked 50 hours or more. This was up from

⁷ Op Cit p212.

⁸ Australian Bureau of Statistics publication 4102-0, Australian Social Trends, 2006.

22% in 1985. Furthermore, fathers of children under 15 who worked full time in 2004/5 spent over 43 hours per week at work and 33% worked more than 50 hours per week⁹.

The changes to hours of work in part reflected changes to the institutional framework governing relations between unions and employers. This framework underwent profound changes in the 1990's and beyond when the focus of bargaining changed from the award system to enterprise bargaining with a shift since 1996, at the margins, to individual contracts. The catch cry from employers and government was the dreaded 'F' word – 'Flexibility'.

In the railway industry the privatisations of the late 1990's saw the incoming (mainly North American) owners, take a quite different attitude to Australian wages and conditions, union representation and work practices. In a number of these newly privatised enterprises (ASR, TasRail and AWR), wages and conditions of employees were reduced and there were significant changes to hours of work provisions (standard week, fortnightly roster cycle, introduction of aggregate salaries and individual employment contracts). Union density fell as did rail safety standards. After campaigns by the union over a number of years wages and conditions have improved and collective bargaining reinstated. Except for a small outpost, the US presence has been extinguished from the industry.

Trade Unions Respond

Responding to societal changes and hours worked, the general trade union movement became more heavily involved in issues surrounding hours and their impact on the balance of work/family life. In 1997, the Australian trade unions' peak body, the ACTU, conducted a detailed survey on stress at work. It identified long hours and rostering as amongst the top three most stressful issues at work. Widespread anecdotal evidence together with an accumulating body of academic research pointed to the drive for flexibility combined with institutional changes to the industrial framework as having a major impact on the hours of work and rostering of employees. Policy was developed by the ACTU and included the need for a binding code of practice, the location of fatigue as a major occupational workplace and OHS hazard and minimum legislated standards for working hours (heavily influenced by the EU Working Time Directive).

An aspect of the unions' campaign was the seeking of the creation of a new standard for working hours through the Australian industrial institution, the Australian Industrial Relations Commission. The Unions demanded new test standards covering:

- Reasonable hours of work (with a 15 point list of what factors would be taken into account);
- Reasonable overtime; and,
- Paid breaks after extreme working hours.

The Commission's decision was that working time arrangements and patterns of hours of work had changed significantly in Australia. Furthermore Australia had working hours longer than most OECD countries with annual hours towards the very top of the ranking, comparable with the United States. Overwhelmingly the union claims were rejected – this was a disappointing though not surprising outcome.

Once again, the dilemma for Australian unions about their industrial award system and institutions was highlighted. With both under fierce attack by a conservative federal Government, the national/supra-national standards as exemplified by the European Directive on Working Hours were unattainable. In a number of ways the claim was too complex and unfocussed. However the Working Hours Case did raise community understanding and awareness of working long hours

⁹ Australian Bureau of Statistics publication 4102-0, Australian Social Trends, 2006.

and confirmed that there were adverse health consequences particularly when associated with shift work.

Another major step in the recognition of fatigue as a national issue affecting the transport industry was the Australian Parliament's House of Representatives report *'Beyond the Midnight Oil'*¹⁰. The report concluded that *'fatigue in transport was a problem that must be addressed by government, by transport companies and by workers in the Industry'*. The report made 41 recommendations, highlighting 11 of these as key recommendations. Not surprisingly, it found that road transport constituted the major problem area in the transport industry for fatigue. In contrast, the Committee commented that it was *'pleased that the rail industry has taken some positive steps toward managing fatigue effectively'*.

One recommendation directly concerned fatigue in the rail industry. The report held that *'the Minister for Transport should propose amendments to the current draft of the national codes of practice and provide for more detailed hours of work rules for train crew, taking into account prior patterns of work and rest, the length of time on duty and the time of day of the work period together with a clear statement of the obligation that employers had to manage fatigue in the workplace'*

The breadth of the recommendations of the inquiry reflected its concern with fatigue in the transport industry. The inquiry saw merit in combining prescriptive regulation and non-prescriptive outcomes based approaches to fatigue. It called for the development of a National OHS standard for fatigue in the workplace, identifying fatigue as a workplace hazard generally and specifically in the transport industry. Furthermore, it was recommended that codes of conduct for all sectors of the transport industry be developed and where appropriate, be given status by being referenced in relevant transport or OHS legislation. Of the 41 recommendations three related to industrial issues.

The impact of change on the Australian rail industry

At the end of 1993, the Australian Government adopted a report on national competition policy and by mid 1995, it was enshrined in national competition legislation and competition policy agreements between the federal and state governments. These neo-liberal reforms had a major impact on the rail industry over the next 10 years in terms of the vertical disaggregation of rail businesses, open access to rail track, privatisation and contracting out.

A direct causality of these reforms was railway safety. For a detailed account see the RTBU paper titled *'Structural Change and Rail Safety in Australia'*¹¹. The major rail accidents in NSW at Glenbrook in 1999 and at Waterfall in 2003 prompted comprehensive investigations, trenchant criticism of the reform process in the rail industry and a raft of recommendations for change. The NSW Rail Safety Act in 2000) was comprehensively reviewed, the role of the regulator significantly altered and regulatory resources increased. The change in NSW provided the benchmark for the later discussions on the development of national model rail safety legislation.

One response by the RTBU to the changes in both the rail safety environment caused by restructuring and industrial deregulation was to lobby for changes to the NSW Rail Safety Act in 2001/2 to include an hours of work provision for train crew. The NSW Rail Safety Act 2002 provides in Schedule 2 for Fatigue Management. Clause 1 provides:

- For working hours for employees driving freight trains; a 2 person operation, the maximum shift length to be worked is 12 hours; one person operation 9 hours; a

¹⁰ *Beyond the Midnight Oil: an Inquiry into managing fatigue in Transport*: House of Representatives Standing Committee on Communication, Transport and the Arts, October 2000.

¹¹ RTBU Paper: Structural Change and Rail Safety in Australia: International Rail Safety Forum: Tokyo, Japan, November 10-17,2002.

minimum rest break of not less than 30 minutes taken between the 3rd and 5th hour for a one person operation and at least 11 continuous hours between shifts at the home depot and 7 hours when away from the home depot; and, a maximum of 12 shifts in any 14 day period.

- For employees driving single manned passenger trains, maximum shift lengths of 10 hours for long distance passenger trains and nine hours for urban train drivers, with the same further conditions as outlined above.

This was one of a number of developments concerning train crews hours of work and has been reflected around the world. The International Transport Workers Federation in February 2004¹² reported that better working conditions for train drivers could become European law as a result of an agreement between the European Transport Workers Federation and the Community for European Railways. The agreement includes requirements for a minimum daily rest period of 12 hours and a maximum daily driving time of 9 hours. The parties resolved that the agreement should become a EU directive.

Radical Changes to Industrial Regulation

The Federal Government in November 2005 introduced through legislation, the most dramatic change to industrial relations and wage fixing arrangements for over 100 years. The reforms are aimed at shifting the balance of power between employers and employees. The new laws:

- Remove protection from unfair dismissal for millions of workers as businesses with fewer than a 100 workers are exempt;
- Make it easier for employers to push workers onto individual contracts at the expense of collective bargaining and against ILO conventions. Employers now have the unilateral right to refuse to bargain collectively with workers. There is no free or unfettered bargaining;
- Strip back award conditions. This has serious implications for hours of work and shift work and fatigue as many associated matters become “negotiable”;
- Make many ordinary union activities illegal;
- Reduce the role of the independent tribunal, the Australian Industrial Relations Commission in arbitrating workplace standards; and,
- Change the way minimum wages are set by the establishment of a new minimum wage fixing body

In addition to the industrial legislation, the Federal Government had introduced in June 2005 a Bill to change the federal Workcover (OHS) legislation and has foreshadowed further changes later this year. Key of the known changes is a proposal to remove any reference to unions being involved in the election and role of OHS representatives. In April 2006, a further review of the Act was announced by the relevant Minister with the terms of reference including *‘ensuring the development of health and safety measures at the workplace which best suit the needs of individual enterprise.... remove unnecessary prescription’*. This is code for pro-business policies and attempts to dismantle existing standards.

In the late 1990’s the funding of the National Health and Safety Commission (NOHSC) was cut in half and the range of compliance codes it was developing was severely curtailed. It was subsequently abolished and replaced by the Australian Safety and Compensation Council, a body that reports directly to the Federal Minister for Workplace Relations. Currently State workers compensation and OHS provisions cover the overwhelming majority of railway employees although the various legislative reviews will have an impact over time.

National Model Rail Safety Legislation Developed

¹² ITF Campaign Alert – No 2, ITF News Online, 11 February 2004 www.itf.org.uk.

The National Transport Commission was established in 2004. Its role is defined under the *'Inter-Governmental Agreement for Regulatory and Operational Reform in Road, Rail and Intermodal Transport'*. One of its key tasks *'is to develop reforms in relation to a national policy on key rail safety issues and procedures and standards to manage major rail risk factors'*. In May 2004, the NTC released an issues paper concerning potential changes to the co-regulatory framework. In December 2004, the NTC released a discussion paper titled *'Improving the Regulatory Framework for Rail Safety in Australia'*. In August 2006 the NTC released a discussion document titled *'Model Rail Safety Regulations: Draft Regulatory Impact Statement'*. These papers are available from the NTC web site www.ntc.gov.au) The papers provided the framework for a national approach to rail safety legislation

The NTC took an early interest in fatigue management in the rail industry, due to its involvement with fatigue in the road freight industry. At a presentation to the Shiftwork Consortium in August 2003, the then NRTC noted:

- The absence of a national approach to fatigue in the rail industry;
- That fatigue was regulated in some States through safety accreditation
- That the NSW Rail Safety Act 2002 contained clear limits on hours of work; and,
- The work being carried out through the Centre for Sleep Research projects.

From the NRTC's perspective, the issues to be addressed were:

- The nature and extent of the fatigue problem;
- An assessment of how fatigue was then being managed;
- An investigation of alternative models for addressing fatigue-prescription of hours, fatigue management within prescribed limits, options for industry to choose, and a focus on risks;
- Delivery options to be explored included legislation/regulation, codes of practice, regulator guidelines, and OH&S; and,
- The applicability of approaches adopted in other modes of transport.

Following agreement between governments the NTC was established in 2004 to include rail regulatory reform with the first major project focusing on rail safety legislation together with regulations, codes and guidelines that included fatigue management for rail safety workers. After two years of discussion, consultation and negotiation, Australian Transport Ministers in June 2006 voted unanimously to approve the National Model Rail Safety (Reform) Bill. The major caveat to the implementation of national legislation by Ministers was their acceptance of the position of the NSW Minister that the Hours of Work Schedule would continue in rail safety legislation in NSW.

To assist in the development and implementation, a steering committee was established to advise the NTC on policy issues arising from the preparation of the legislation. This initially comprised the NTC, the rail employer's industry association and regulators. Lobbying by the RTBU saw a union representative added at a later stage.

The Model Rail Safety Bill

The explanatory memorandum accompanying the Bill indicates that *'the development of the Bill has been underpinned by a set of principles which have been given effect in the Bill and the following are provided for the purpose of illustration'*. These include:

- The principle of shared responsibility - a number of persons share responsibility for rail safety and form part of the rail safety chain of responsibility;
- The principle of integrated risk management – this covers circumstances when mangling risks which have an impact on other railways or networks;

- The principle of transparency and consistency, which provides that rail regulatory decision making processes, should be timely, transparent and nationally consistent;
- The principle of participation, consultation and involvement. This principle provides that if people and organisations share responsibility for rail safety they should participate and be involved in the management of risks associated with rail operations; and,
- The principle of proportionate, consistent and fair enforcement.

The Bill provides includes heads of power for the making of regulations. These will be supported by national compliance codes and will, inter alia, address matters affecting rail safety workers such as medical fitness assessments, management of fatigue, health and fitness management program, alcohol and drug management program, testing for presence of alcohol or drugs, fatigue management program and assessment of competence. The effect of compliance codes is that a person who complies with the compliance code is taken to have complied with the Act and the regulations in relation to the particular duty or obligation.

Part 2 of the Act covers 'Occupational Health and Safety Legislation' and its connection to rail safety legislation. A note in this part of the Bill indicates that the Act *'creates additional protections, rights and obligations necessary because of the special risks associated with railway operations... This Act makes it clear that it provides for an increase in the standard of protection for people at work in railway operations, in addition to the protection that the OHS legislation provides'*.

Fatigue specific provisions of the Act and Regulations

Section 57 of the Bill requires rail transport operators (RTO's) to have a Safety Management System that includes, among other things, a fatigue management program prepared in accordance Clause 67. This clause requires RTO's to prepare and implement a program for the management of fatigue that complies with the provisions of the Act.

Due to differences between the parties in the preparation of fatigue management policies and principles, it is not intended to gazette regulations under Section 67 of the Bill or to develop compliance codes. The parties are producing a fatigue management guideline. Fatigue management programs will be developed by RTO's following consultation between the RTO and the rail safety workers and their representatives. The programs are then lodged as an application for variation of accreditation under section 47(2) of the Bill.

Development of fatigue management guideline

The process for the development of the guidelines included a reference group consisting of the NTC and its technical advisors, regulators, the employer industry association and a representative of the RTBU. Initially the NTC produced a draft code of practice, which had as its centrepiece a 3-tier proposal that provided different degrees of fatigue management. The most controversial aspect of this was to allow an extension of hours of work from 12 to 14 in the third tier. At the request of the RTBU and the NSW rail regulator, the NTC convened a Rail Fatigue Expert Group in early March 2006 to review the package of documentation and provide comment. Members included two academics from Australia, one from New Zealand and a member of the Transport Development Centre of Transport Canada.

Members of the Reference Group, including the RTBU accompanied by an RTBU delegate presented their views to the expert group which, in a subsequent report, confirmed subject to a number of refinements, the principles contained in the NTC proposal. Following this development, discussion at the policy advisory committee to the NTC saw a divided response and a substantial review by the NTC. This review resulted in the NTC withdrawing the extended hours provisions from the proposed code and the alteration of the status of the fatigue proposal from compliance code to guideline status.

In July 2006 the NTC produced for public comment '*Fatigue management for rail safety workers: Guidelines*'. These guidelines are intended to:

- Assist operators meet their legislative obligations either under existing State legislation or the provisions of section 67 of the Bill to ensure rail safety workers (RSWs) are not impaired by fatigue at work;
- Advise on "best practice" approaches to managing fatigue risks;
- Promote a systematic consultative approach to assessing, identifying, controlling and monitoring the risks factors associated with fatigue while providing options for the way in which RTO's can choose to manage these processes;
- Enable a consistent national application of fatigue management principles; and,
- Encourage the development and application of training and information programs.

The Union has made a detailed submission about the draft Guidelines. General points from the RTBU's submission include:

- Throughout the development process to manage fatigue in the Australian rail industry there have been differences of opinion on a range of issues between the RTBU, the NTC, regulators and employers. Because of these differences it is the RTBU's view that the guidelines do not represent the best outcome;
- The NTC and regulators should ensure that research begins immediately to measure the impact of the proposed guidelines so that when a review occurs, research can inform the review. More research needs to be done in a number of key areas including the social impacts of night and shift work;
- Decisions in the future should not be left to "experts". They can certainly inform but the union and its members must be involved in decision-making;
- The current 'guideline' is worded very similarly in parts to a Fatigue Expert Group 2001 report to the NTC titled '*Options for a regulatory approach to fatigue in drivers of heavy vehicles in Australia and New Zealand*'. The RTBU was disappointed the NTC had not looked much wider than the road transport industry. The RTBU view is that the road industry is not best practice – regulations are often ignored, enforcement is poor and economic conditions cause exploitation of employees and contractors. The road freight industry, unlike rail, has a demonstrated fatigue problem, which results in many fatalities each year at a cost measured in the hundreds of millions of dollars.

The next stage of the process will be to assess the various comments made by the parties and a number of relatively minor changes are likely to be made.

Possible future directions for Fatigue

The RTBU suggests that there are a number of possible future directions for fatigue management in the rail industry.

Research in the Australian Rail Industry is relatively recent. More needs to be done. The RTBU suggests that future research must occur in a number of areas and with a number of parameters:

1. The industry self-funding model for fatigue research is unlikely to provide a sustainable model. Government through OHS regulators and rail regulators, research institutions and rail industry participants are more likely to be the group that implements a research program. This would reflect the requirements of the new rail safety model legislation, which provides that the functions of the rail regulator include the provision of advice, education and training in relation to rail safety.
2. To be successful, any research program must involve rail workers and their families.
3. More research needs to be done on reviewing and updating the fatigue model.

4. Another area of future research should involve the development and application of a 'psychosocial index' to rostering. This will enable rosters to reflect group social and work time preferences¹³.
5. The concentration of the rail and wider industry on fitness for work and impairment in a wider context would suggest that there would be an increased attention given to devices, which measure impairment including fatigue and drugs. This will be accelerated given the recent introduction in Australia of random drug testing in one state under the motor traffic legislation, for a limited range of drugs. The issue of impairment raises a number of lines of inquiry including the differential treatment of impairment resulting from fatigue compared to drug and alcohol where the approach has been the testing for presence and the widespread introduction of random testing.
6. Fatigue is distinguishable from many other workplace hazards because of the existence of non-work related causes of fatigue whether these are caring for sick family members, financial concerns or social and family commitments. The impact of shift and night work on work and family life balance needs to be further examined. The need for rail employers to attract more women into the industry to address looming skills shortages will require more attention is given to this issue¹⁴.

From our experiences in addressing fatigue management for rail safety workers the union argues that a wider program for all transport workers is required.

A key to successfully addressing fatigue is to adopt a National OHS standard on fatigue in the workplace that identifies fatigue as a workplace hazard in the transport industry, and the implementation of compliance codes in all sectors of the transport industry referenced to both OHS and transport legislation. The road freight industry continues to be the Achilles heel in relation to fatigue. The NTC has a separate project to review fatigue management in the road freight and long distance bus sector. The economics of the long distance road freight industry, its structure and low union density make it most unlikely that a convergence on fatigue across the different modes of transport will occur in the short term.

The increasing deregulation of the labour market in Australia combined with an increase in the numbers and use of contractor's means that industry will need to be vigilant to ensure fatigue levels do not further affect employee health and safety across a range of industries including transport.

¹³ Australian Railways Shiftwork and Workload Study-Phase Two Final Report. (Centre for Sleep Research: University of South Australia.)

¹⁴ See The Australasian Railways Association publication *'The Changing Face of Rail: A Journey to the Employer of Choice: Attraction and Retention of employees in the Australasian Rail Industry'* April 2006 (Available from ARA web site www.ara.net.au).