DEPARTMENT OF MINES, INDUSTRY REGULATION AND SAFETY (DMIRS) COMMENTS: National Transport Commission's issues paper: *Effective fatigue management*

The National Transport Commission (NTC) is undertaking a review of the Heavy Vehicle National Law (HVNL) from a first-principles perspective — with the intention of creating a completely new law instead of making changes to existing law. The *Effective fatigue management* issues paper¹ (NTC issues paper) is part of the HVNL review. The NTC issues paper identifies fatigue management problems related to the current HVNL and seeks public submissions on opportunities for improvement. The public consultation period closes on 16 August 2019.

DMIRS' input on the NTC's issues paper is comparable to its recent input into the Department of Transport's submission on the Productivity Commission's (PC) 17 May 2019 issues paper on National Transport Regulatory Reform. DMIRS understands that the Department of Transport has made a submission in relation the PC issues paper, which incorporates comments from DMIRS on commercial vehicle driver fatigue regulation. The PC draft report is expected to be released in November 2019.

This submission takes into account NTC's main goals of regulating fatigue management in a new HVNL to achieve: safer outcomes; effective fatigue risk management; continuous improvement in risk controls; a harmonised approach (rather than a uniform one); simple and flexible compliance options; and efficient enforcement and proportional sanctions. This submission provides responses to the key questions which are of relevance to Western Australia, with like questions grouped according to the response.

KEY QUESTIONS

Question 1: How can we change our approach to fatigue management so we reduce fatigue-related incidents and deliver Australia's road transport task efficiently and safely?

No comment other than the comments and observations provided at the questions below.

Question 2: What fatigue risks that are currently out of scope for the HVNL should be brought into scope? What is in scope that shouldn't be?

There are multiple factors that contribute to fatigue-related incidents involving heavy and light freight and passenger transport vehicles. This requires varied intervention strategies to improve road trauma statistics where fatigue is attributed as a factor and a non-punitive approach that prioritises education above penalties and prosecutions. The national HVNL fatigue management approach will benefit from broadening its scope to ensure it better aligns with the national work health and safety laws; targets all commercial vehicles with the aim of improving overall outcomes instead of focusing on punitive measures; and places a greater emphasis on education of the industry.

The State Government of Western Australia introduced regulations for driving commercial vehicles on 1 July 2003. Western Australia's fatigue system recognises commercial vehicle driver fatigue as an occupational safety and health matter that is to be managed at every point in the supply chain. Unlike the national HVNL, fatigue management in Western

¹ National Transport Commission 2019, <u>Effective Fatigue Management</u>, Issues paper, NTC, Melbourne, May 2019.

Australia it is not limited to the driver of the heavy vehicle. Western Australia regulates driver fatigue under the *Occupational Safety and Health Act 1984*, with fatigue management requirements set out in the Occupational Safety and Health Regulations 1996 (OSH Regulations) and the Code of Practice - Fatigue management for commercial vehicle drivers.

Under the current laws in Western Australia, all operators or employers of commercial vehicles have an obligation to provide a safe system of work, with employers or principal contractors held accountable to a criminal standard of proof. This obligation also applies to interstate operators of heavy and light commercial vehicles entering Western Australia.

Western Australia's fatigue regulations are not limited to heavy vehicles only — they are applicable to all commercial vehicles in the State, with a recent legislative amendment to the OSH Regulations in 2019 extending the fatigue provisions to the taxi industry as well. Research has found that taxis are approximately four and a half times more likely to be involved in a fatal accident than other vehicles.² Light commercial and passenger vehicle drivers are currently out of the scope of the HVNL, which only regulates heavy vehicles. This is another example of the broader scope of Western Australia's system as opposed to the national HVNL.

Question 3: What are the key risk factors associated with long hours, night shifts and other work schedule factors? How do we account for the fact that not all work hours have the same risk without introducing excessive complexity?

Night-shift workers are at high risk of drowsiness-related motor vehicle crashes as a result of circadian disruption and sleep restriction. A real-vehicle driving study³ demonstrated increased objective and subjective drowsiness and degraded daytime driving performance in night-shift workers while driving after a night of work, deteriorating with drive duration. Driving performance measures included lane excursions, near-crash events, and drives terminated because of failure to maintain control of the vehicle.

Further, DMIRS inspectorate has advised that driving at night presents itself as a key risk factor even when the driver has rested during the day. It is known that most workplace accidents on nightshift occur between 2–5 am. There is global data to support this knowledge. In addition environmental factors also exacerbate the level of risk when driving at night simply because of the lack of light and other road users who are sharing the same environment at the same time in relative darkness.

In recognition of the variation in risks corresponding to work hours, it is imperative to tailor the fatigue management system to the circumstances. The NTC issues paper acknowledges the rigid and prescriptive nature of the HVNL with some impractical requirements resulting in inconsistencies in its application.

Western Australia's system was developed in close consultation with industry and is tailored to suit the unique operating environment in this State. Western Australia's fatigue regulations allow for some flexibility in its application as they need to be met 'so far as practicable'. Commercial vehicle drivers in Western Australia are required to meet prescribed work and rest hour requirements, the fatigue regulations allow variations to

² Rowland, B.D., Freeman, J.E., Davey, J.D. and Wishart, D.E; as cited in Staysafe 36, *A profile of taxi drivers' road safety attitudes and behaviours: Is safety important*, Proceedings of the 3rd international Road Safety Conference, Perth, Western Australia, 2007.

³ Michael L. Lee et all, *High risk of near-crash driving events following night-shift work,* USA, 2015

these requirements under reasonable circumstances, so long as driver fatigue is minimised. For example, while current records must be kept of the driver's work time, non-work time and breaks, Western Australia's legislation does not stipulate the format for record-keeping.

The 'so far as reasonably practicable' requirement also influences Western Australia's approach to fatigue management, noting the potential for unexpected delays. However, drivers and operators are expected to reschedule the trip or make alternative arrangements when they are aware of potential delays.

Question 4: How should a new HVNL address driver health and lifestyle factors? What kinds of controls could be effective?

In addition to the risk factors identified in Question 3 (long hours, night shifts and work schedule factors), the health and safety of heavy vehicle drivers is also influenced by other factors. Irregular sleep and exercise patterns; poor eating habits; stress; and the lack of opportunity for participation in physical, social or leisure activities may contribute to poor physical or mental health.⁴ The ten-year follow up study of heavy vehicle drivers in Denmark also reported an increased risk of lifestyle related diseases.⁴ Although not much is known about the incidence of mental health issues among heavy vehicle drivers in Western Australia, a cross sectional study⁵ of 300 male heavy vehicle drivers in Brazil reported the prevalence of depression (14 per cent) at a rate higher than the general population.

The DMIRS inspectorate has informed that there appears to be little or no training on 'human factors' in the industry, with limited understanding of how the body works and interacts with the operation of plant such as a commercial vehicle. If this can be resolved, it may result in greater voluntary compliance with existing legislative requirements without introducing further complexity. Human factors training will also address matters raised in Question 3. Additionally, if drivers are aware of the human factors that affect how they think and react, it is highly likely that they will implement their own effective controls to mitigate the risk to themselves and other road users.

A Curtin-Monash Accident Research Centre study⁶ concludes that heavy vehicle drivers clearly face considerable threat to their health as evidenced by the high levels of obesity and smoking, as well as little opportunity for regular exercise. The study recognises the part played by sleep disorders particularly obstructive sleep apnoea (OSA) and its relationship to crashes. OSA can fragment sleep and produce excessive daytime sleepiness that is likely to cause the increase in crashes seen in people with this condition. Some of the key research recommendations that may be considered while designing effective controls for driver health in the new HVNL are listed below:

- Focus on addressing the underlying factors that create fatigue in the first place, including safer scheduling, particularly regarding night time driving.
- The use of diagnostic tools that do not rely on self-report measures when testing for sleep disorders. Heavy vehicle licensing policy makers, general practitioners

⁴ Dahl, S., Kaerlev, L., Jensen, A., Tuchsen, F., Hannerz, H., Nielsen, P. S., et al., *Hospitalization for lifestyle related diseases in long haul drivers compared with other truck drivers and the working population at large*, University of Southern Denmark, 2009.

 ⁵ da Silva-Junior, F. P., de Pinho, R. S., de Mello, M. T., de Bruin, V. M., & de Bruin, P. F., *Risk factors for depression in truck drivers*, Department of Medicine, Universidade Federal do Ceara, Brazil, 2009.
⁶ Meuleners L, Fraser M, <u>The Heavy Vehicle Study Report: Results from Western Australia</u>, Curtin Monash Accident Research Centre, Curtin University, October 2012.

and employers in the heavy vehicle industry need a better understanding of sleep apnea to identify the most effective ways to assess and manage the condition for this group of workers.

- Greater effort to improve the mental health of heavy vehicle drivers.
- Greater focus on targeting groups such as heavy vehicle drivers in smoking cessation and physical activity programs.

DMIRS inspectors support the above recommendations and inform that better tools need to be developed to address sleep disorders. The current system of personally completing the questionnaire or telling the doctor the answers a driver thinks will get him past the medical assessment is flawed. The reality is a high number of drivers are over 50 years old and have many health issues. The current medical standards *Assessing Fitness to Drive 2016* (as amended up to August 2017) allows medical practitioners to determine the validity period of the driver's medical assessment as relevant. This may result in increased general health and fatigue risks in drivers – for example, in instances where a driver aged above 50 obtains a medical assessment of fitness to drive that is valid for up to five years. Crash data may show a number of undiagnosed / or untreated medical issues are factors that contribute to accidents.

Question 5: How do we ensure the HVNL is agile enough to adopt best practice fatigue management as it emerges? How do we encourage continuous improvement? Can training help?

While it is appropriate to have a HVNL that is responsive to emerging best practice in relation to fatigue management, this needs to be balanced against the ability of employers and organisations to keep up with the changes. As with the rest of Australia, the overwhelming majority of road transport operators in Western Australia are small businesses. In the calendar year 2018, 98.5 per cent of all Western Australian businesses in the road transport industry were small businesses with less than 20 employees⁷. Regulators need to be wary that implementing changes may have unintentional consequences for small operators such as increasing red tape and regulatory burden.

WA Heavy Vehicle Accreditation, administered by Main Roads WA, is mandatory for individuals and organisations which require a permit or order to perform any transport task as part of a commercial business or for profit within Western Australia, including interstate operators. Fatigue Maintenance is one of the three mandatory modules; in addition to Vehicle Maintenance; and Dimension and Loading. In contrast, the National Heavy Vehicle Accreditation Scheme is voluntary and enables operators to be eligible to operate under concessional limits.

The benefits of receiving driver fatigue training is associated with lower risk of crashes as found in a study⁶ of heavy vehicle drivers in Western Australia. It is a mandatory requirement in Western Australia that all heavy vehicle drivers complete fatigue-management training. The rationale is to control for fatigue risk that may lead to vehicle crashes. Under the HVNL system, drivers that operate under standard hours are not required to complete any fatigue management training. The study found that drivers who had not completed fatigue training as required by their employer were also more likely to crash. The study supports mandatory driver fatigue training and recommends regular updates for all drivers. A DMIRS inspector has advised that although at present, the fatigue

⁷ Australia Bureau of Statistics, 8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018, by ANZSIC Road Transport (ANZSIC codes 4610 to 4623).

training is only required once, Main Roads WA Auditors may be pushing for a yearly refresher. Some form of refresher training at reasonable intervals should be undertaken.

Question 6: How can we better accommodate emerging technologies? How can the new HVNL get the best value from technology and data? Do you think fatigue monitoring technology can supersede work and rest hour requirements?

As a regulator, DMIRS is cognisant that on its own, a regulatory regime is not totally effective. The new HVNL should consider complementing driving hour's regulations with other fatigue management programs that will assist in monitoring driver alertness and sleep though detection of mental fatigue from eye-tracking data, for example. Although the utility and effectiveness of these emerging techniques are unproven, the new HVNL should consider incorporating proven techniques to increase the safety outcomes of its driving hour's regulations as well as increase productivity for transport operators and drivers.

Question 7: How can the new HVNL meet the needs of all Australian states and territories? What should the new HVNL adopt from Western Australia and the Northern Territory, other transport modes and other industries' fatigue management approaches?

See answers to previous questions.

Question 8: Are prescriptive rules desirable in a new HVNL? If so, how can we simplify rules in the HVNL to make them easier to understand so that they're easier to comply with?

Western Australia recommends against a prescriptive approach to fatigue management under a new HVNL. Many of the impractical requirements and other disadvantages of the current system can be attributed to a narrow interpretation of the objectives.

To reiterate the response to Question 3, Western Australia's fatigue regulations allow for some flexibility in its application as they need to be met 'so far as practicable'. Commercial vehicle drivers in Western Australia are required to meet prescribed work and rest hour requirements, the fatigue regulations allow variations to these requirements under reasonable circumstances, so long as driver fatigue is minimised. For example, while current records must be kept of the driver's work time, non-work time and breaks, Western Australia's legislation does not stipulate the format for record-keeping.

Question 9: Would the compliance options described in section 4.5 be a more effective approach to regulating fatigue management? If so, what should be included in the new HVNL, its subordinate documents, or elsewhere, such as in work health and safety laws? How would the appropriate fatigue management option be allocated to an operator – by self-selection or other means?

More research and analysis is needed about road transport and freight movements including data on industry composition as well as trends and forecasts related to freight movements. In order to achieve the reform objectives, planning needs to be based on evidence and research.

Question 10: Should the new HVNL give operators the option of taking full responsibility for risk management? What would be the roles of the regulator and roadside enforcement in such a system?

Western Australia does not support giving operator's full responsibility for risk management. To be effective, risk management should be a shared responsibility among all parties involved in the operation, where various stakeholders are assigned responsibility for each of the identified operational and compliance sub-risks.

The responsibility for risk management should be undertaken at every step in the chain. This should be an extension of the Chain of Responsibility (CoR) approach which holds all parties within the supply chain responsible for road transport safety - not just the driver. In Western Australia, the CoR approach to mass, dimension and loading requirements includes even light vehicles, ensuring accountability for all parties in the transport chain.

Question 11: How can we get the best overall value from a compliance and enforcement strategy for fatigue management? How scarce resources are best allocated, and what tools do regulators need? What provisions in the law do operators need?

While Western Australia's fatigue management system works well for the State's unique circumstances, its efficiency may sometimes be impacted by the issue of inadequate regulator resources. It must be acknowledged that this is an issue that cannot be addressed by modifications to the fatigue management system alone.

Working hours: DMIRS inspectors are public servants with core working hours between 7am to 6pm, while the commercial vehicle transport industry is a 24x7 operation. This 'mismatch' is an issue given that trucking industry data which has consistently shown that the highest rate of crashes on a per (heavy) vehicle basis are outside of business hours. National data indicates that a disproportionate number of fatigue incidents in the trucking industry happen between midnight and 6am, with over 40 per cent of all fatigue losses occurring during this time period in 2017⁸.

Road block operations: In Western Australia, since DMIRS inspectors do not have the powers to stop trucks, they work in collaboration with the Western Australian Police Force (WAPOL) and Main Roads WA to organise road blocks to stop commercial vehicles. It is not unusual for DMIRS inspectors to follow up fatigue inspections during road blocks by visiting the employer yard on another day. Planning road block operations also includes consideration of locations with sufficient parking for heavy vehicles and rest areas for drivers. Opportunities to participate in road block operations with WAPOL and Main Roads WA have significantly reduced over the last few years due to resource cutbacks across the State Government agencies.

Limited inspector manpower: Commercial vehicle driver fatigue management is only a small part of the operational industry responsibilities of the industrial team. Organisations like Main Roads WA and the National Heavy Vehicle Regulator are able to focus on commercial vehicles with greater access to resources and enforcement tools such as

⁸ National Transport Insurance, NTI <u>Major Accident Investigation Report 2019</u>, eight edition, Fatigue Incidents by Time of Day, Page 21.

infringements (to which DMIRS does not have access). However, this does not preclude DMIRS from prosecuting and publishing that prosecution outcome.

Question 12: What else would you like to tell us about effective fatigue management?

The HVNL could consider removing references to the base or depot which seems to give drivers / operators an out in terms of recording work time when they are less than a certain distance away from base.

A national approach to record keeping would be desirable, with consideration given to electronic records. This should be a higher focus in order assist with accuracy of records and compliance with the operational standards. A number of companies are developing electronic systems to record working hours and breaks – some with varying success. The new HVNL could consider developing such systems and allow access to the systems to help with compliance.

Inconsistencies for interstate drivers

Commercial vehicle drivers who drive outside Western Australia must comply with the fatigue management regime that is applicable in the driver's current location. This requirement to comply with different fatigue management regimes may be a regulatory burden on the freight and logistics industry.

Accordingly, commercial vehicle drivers operating out of Western Australia are required to keep a complete trip record documenting the hours worked outside the State to determine compliance with Western Australia's fatigue regulations. The driver should keep a complete trip record covering the time spent at work in another state or territory. It is necessary to document the hours worked outside of Western Australia's borders to determine whether compliance with the Western Australian legislation has occurred. Western Australia recommends the driver records the time zone of the place of departure to eliminate any confusion from changes in time-zone between jurisdictions.

Western Australia's unique geography; and rural driving

One of the key reasons why Western Australia did not adopt the HVNL in 2011 was that the national proposal did not suit the unique needs of the State, especially in relation to rural and remote area driving. The HVNL does not account for special hours of work and scheduling for work-environment related risk factors which are relevant in a state with a vast geography like Western Australia. Some of these factors include large working radius; long driving distances; high external temperatures; flood conditions; poor road conditions; and long gaps between rest stops and convenience facilities.

Supply chain operational factors in Western Australia

A single national transport policy is not appropriate given Western Australia's supply chain operations which are quite distinct from other jurisdictions. For example, Western Australia's road access regime allows larger vehicles (high wide loads) than other jurisdictions in Australia as well as concessional loading which allows operators to carry more freight than their counterparts in the east of the country. These arrangements support the trucking industry's inbound and outbound bulk movements, which are crucial for the economic productivity.