

## **Rail Fatigue Management System Regulations** ©2024

### **Request to Approve an Inspection, Compliance and Enforcement Approach for the Proposed Rail Fatigue Management System Regulations Presentation Narrative**

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© Liam Callaghan, Jonathan Côté, Kevin Dulhanty, Edith Gagnon and Josée Laframboise

Career Development for Regulatory Professionals  
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#### **Slide 1**

Key Message: Thank the Minister for taking the time to meet, introduce yourself and colleagues.

#### **Slide 2**

Key Message: The proposed *Fatigue Management System Regulations* come with challenges but there are solutions.

- The adoption of the *Fatigue Management System Regulations* is crucial to accomplish the mandate letter commitment to improve rail safety.
- The adoption of this type of regulation presents some complex inspection, compliance and enforcement challenges.
- The purpose of this presentation is to discuss these challenges and offer a series of recommendations and proposed next steps.

#### **Slide 3**

Key Message: Adoption of a *Fatigue Management System Regulations* is important

- Fatigue is pervasive in the transportation sector
  - Employees are required to work long and irregular schedules that interfere with sleep, in challenging conditions and across multiple time zones.
  - Fatigue serves as a risk to the safety of rail operations as it impairs human performance.
- Challenging issue to manage within the transportation sector
  - Since 2016 fatigue has been reflected in the transportation safety board watch list of key issues that need to be addressed to improve the safety of Canada's transportation system.

- The graph you see here is based on data collected by the Transportation Safety Board of Canada and indicates an increase in fatigue related rail incidents in the last two decades.
- Lac-Mégantic Quebec, shown in the photo, is a major rail incident in Canada where fatigue was one of the factors that led to the disaster.

#### Slide 4

Key Message: Provide background on the current legislative framework and point out the gaps.

- Legislative framework is under the Rail Safety Act.
- There are two main components:
  - The duty and rest period rules that were approved by your predecessor 2020 but only apply to operating employees. This represents a gap in the regulatory framework since Transportation Safety Board investigation reports have identified instances where fatigue in non-operating employees led to unsafe conditions
  - The Rail Safety Management System Regulations also addresses fatigue when it comes to scheduling but lacks an overall systems-based approach.

#### Slide 4 (continued).

- The proposed amendments to the *Railway Safety Management System Regulations* will serve to close these gaps.

#### Slide 5

Key message: Various factors that contribute to fatigue

- Fatigue can be induced or exacerbated by a combination of factors that can be difficult to control (i.e. sleep disruption, continued or prolonged wakefulness, circadian rhythm effects, sleep disorders, individual factors, work environment).
- Fatigue is a risk that is not easily mitigated because there is no single countermeasure to eliminate it.

#### Slide 6

Key Message: Explain what the Fatigue Management System is, why it's needed and what it's trying to accomplish.

- Since there is no single countermeasure to fatigue, a systems approach to mitigate various factors that can contribute to fatigue-related safety risks.
- The *Fatigue Management Systems Regulations* are really trying to affect industry culture by:
  - Instilling in management all the way to front line employees the importance of mitigating fatigue related risks;
  - Establishing clear policies, processes and procedures for dealing with fatigue; and
  - Establishing trust within the stakeholder community on the mechanisms that are in place managing these risks.

- Fatigue management at a systems level is already adopted by other countries such as the United States and the United Kingdom. The United Kingdom's approach is largely recognized as being successful in reducing the number of rail incidents.

### Slide 7

Key Message: Summarize the three main challenges associated with the proposed regulations.

1. Establishing trust is an issue because we're looking to change culture, promote shared responsibility and openness. Doing this is dependent on establishing trust.
2. Minimizing regulatory burden. There will be regulatory burden associated with implementing the new fatigue management system regulations, but these can be minimized through Transport Canada inspection, compliance and enforcement approach.
3. Verifying compliance and assessing effectiveness. One of the challenges associated with outcome-based regulations is having the tools in place to verify the effectiveness of a system, as well as measuring and monitoring the effectiveness over time.

### Slide 8

Key Message: A robust engagement process is important to address challenges related to establishing trust with stakeholders.

- Current environment suggests a lack of trust from rail employees when it comes to managing fatigue related risks. This has been demonstrated throughout the past decade by
  - Persistent calls from unions and employees to improve rail operation safety through management of fatigue-related safety risks;
  - Fatigue related risks led to a strike in 2019 and there is currently a high possibility of a strike or lockout of two major rail companies due to concerns related to fatigue management.
- The first recommendation is for Transport Canada to engage various stakeholders in the development of tools needed to support implementation of the regulatory framework.
- Stakeholders are more likely to put trust in the systems when they
  - have had meaningful input,
  - understand how the regulations seek to address fatigue-related risks,
  - provided with materials that reflect their reality and needs, and
  - understand the consequences of non-compliance with the regulatory requirements.
- Meaningful engagement requires that Transport Canada bring together people from various sectors, regions of Canada, and types of rail operations, management level as well as lower-level employees.
- There are different engagement models that can be used depending on the tool being developed.

### Slide 9

Key Message: Regulatory burden can be minimized.

We recommend that Transport Canada adopt a risk-based approach so the frequency of inspection is proportional to the level of risk, as are the compliance and enforcement actions taken.

- A risk-based approach would allow Transport Canada to minimize the inspection burden on rail companies that represent a lower risk.
- The benefit of outcome-based regulations is that industry can use current tools, or adopt innovative tools for mitigating and monitoring for fatigue. To minimize regulatory burden, we recommend that Transport Canada not require that industry provide data in a specific format, provided that the data is complete and that it demonstrates compliance with their Fatigue management Plans.
  - Ability to analyze data in various formats would require that Transport Canada develop and adopt innovative tools to help review and analyze stakeholder data.

#### **Slide 9 (continued)**

- Reduce regulatory burden by providing industry with tools so that they know what they need to do to comply with the regulations and manage safety-related fatigue risks. As was illustrated in the previous slide, this would include various regulatory guidance documents, templates, best practices and industry toolkits.

#### **Slide 10**

Key Message: Development and adoption of a Fatigue Risk Management Framework is needed for verifying compliance and assessing effectiveness of a fatigue management system.

- Shifting from verifying prescriptive requirements to evaluation of a fatigue management system for compliance with the regulations represents a shift Transport Canada's inspection approach.
- The Fatigue Risk Management Framework would be used to create a risk profile for each rail company by.
  - Weighing the inherent risk factors (e.g. the type and size of the operation, workforce demographic, work environment);
  - Weighing the effectiveness of mitigation measures (e.g. what happens when an employee is fatigued, training and education requirements for employees); and
  - Factoring in compliance factors (findings in audit reports, inspection results, company history of compliance).
- Rail companies and employees know their business best, so our recommendation is to include stakeholders in the development of this tool.
- By including rail companies and employees in the development this would ensure that the framework reflects their reality and create trust in the system used to assess the effectiveness of rail fatigue management systems.

- It is recommended that Transport Canada establish an advisory committee, composed of external stakeholders, internal partners and fatigue specialists to develop a Fatigue Risk Management Framework.

## Slide 11

Key Message: Through the use of risk profiles, Transport Canada could verify compliance and effectiveness of Fatigue Management Systems over time and use this information to inform inspection activities and determine whether the regulations are proving to be effective at reducing fatigue-related risks.

- Rail operators have the ability to tailor the FMS to address the risks that are inherent to their operation.
- A rail operator could have a high level of compliance with the FMPs but see no improvement in mitigating fatigue-related risks.
- Regulated parties are required to provide rail companies an updated version of their fatigue management plans, and audit reports.
- Through the use of the Fatigue Risk Management Framework, Transport Canada could use these fatigue management plans and audit reports to assign risk profiles to various rail operations and track risk profiles over time to determine whether the proposed regulations are effective at reducing fatigue related risk.
- The risk model could also be used to assign inspection frequency.
- This may create an incentive for rail operations to improve the effectiveness of their plans so as to reduce the regulatory burden associated with inspection.

## Slide 12

Key Message: Walk the Minister through the next steps as indicated on the slide.