

indicates that, because of the circadian influence, sleep during daylight hours is generally less restorative than sleep at nighttime. That in itself can lead to sleep deprivation and consequent build up of sleep debt, but not always if carriers carefully monitor schedules to avoid too many successive nights of work and if drivers follow proper sleep regimen. The alternative would be to control the cause of sleep deprivation by limiting the hours that may be worked in a given period. Although there is nothing scientific or magical about seven days, the present rules have been employing that time period as a baseline for many years.

The present rules impose restrictions on driving after 60 duty hours in seven days for drivers of carriers who operate only six days per week, or 70 duty hours in eight days for those who operate every day of the week. Simply continuing those limitations in a revised proposal including a 10-hour daily recovery period in a flexible day should satisfy many carriers, particularly LTL carriers and local delivery operators. As noted earlier, the restrictions in the existing rules only apply to further driving, so that a violation of the rule occurs only when the driver begins or continues driving after the prescribed duty time has accumulated. Therefore, a driver could easily squeeze in a few more non-driving duty hours at the end of the workweek (or after 60 or 70 duty hours had already accumulated in the corresponding period).

An alternative would be to target accumulated duty time and apply the restrictions accordingly. That would mean that further on-duty time must cease when 60 or 70 duty hours within the corresponding period have accrued. The loss of those few additional non-driving duty hours would undoubtedly raise costs in some segments of the industry.

The ATA recommendation would combine the 60- and 70-hour limitations into one 70-hours-in-seven-days limit, and would apply it to all duty time. Therefore, the opportunity to squeeze in *extra* duty hours after completing driving responsibilities in the 70th hour would not be available. At least one carrier calculated that a limitation of 61.25 hours in seven days is the mathematical equivalent of 70 hours in eight days. It did not attempt to factor in the accrual of any additional duty time possible under the present regulations. The DLTCA alternative also provided for a 34-hour restart, which would make it possible to accrue as many as 84 duty hours in any seven-day period. The ATA recommendation,

therefore, would provide opportunities for considerable gains in productivity.

After reviewing the research, comments, and RIA, the FMCSA is convinced that a minimum 34 consecutive hours of off-duty time can begin a new 7- or 8-day period, during which a driver could drive or be on duty a cumulative total of 60 or 70 hours (*i.e.*, the 7- or 8-day "clock" is restarted by a 34-hour off-duty period). The FMCSA selected 34 hours based on the industry's arguments that it be based on scientific guidance, operational needs, common sense, and realistic assumptions. ATA cited Carskadon and Dement, "Effects of Total Sleep Loss on Sleep Tendency," (1979) which they say suggests that people who have experienced total sleep loss, or have accumulated significant sleep debts over an extended period, may need 2 nights of sleep to completely recover. ATA also argued that "a recovery and restart period of 34 hours off-duty will allow a driver to have two uninterrupted sleep periods of 7–8 hours * * *. Moreover, compliance with the minimum 34 hours would result in a driver restarting work at approximately the same time of day as his or her prior shift. This will avoid the shifting of daytime to nighttime schedules which research indicates can disturb the circadian rhythm and decrease alertness." This allows drivers to get at least two sleep periods, without restraining the driver by the unworkable midnight-to-6-a.m. period from the NPRM.

The PATT alternative did not provide a "restart" provision. The ATA alternative provided that drivers who obtain 34 consecutive hours of off-duty time could begin a new 7-day period, during which they could drive or be on duty a cumulative total of 70 hours (*i.e.*, the 7-day "clock" is restarted by a 34-hour off-duty period).

The FMCSA is selecting its staff alternative incorporating a 34 consecutive hour off-duty time can begin a new 7- or 8-day period for the final rule because it provides the most favorable combination of increased driver alertness and reduced fatigue-related incidents.

Short Rest Breaks During a Work Shift

General Concept

In proposing a daily work/rest cycle, the FMCSA stopped short of dividing the 24-hour period into two blocks (on and off duty), as was proposed by industry. The agency sought to place further restrictions on the 14-hour block. One of the reasons for the restriction was to acknowledge operational differences among motor

carriers. Another reason was the proposed elimination of the distinction between driving time and other on-duty time. The principal reason, however, for reserving two hours out of the 14-hour block for rest periods was to ensure that road drivers, who spend most of their time in the driving mode, were afforded the opportunity to improve safety by alleviating potential drowsiness through strategic use of break time. The FMCSA assumed that drivers would rarely, if ever, spend an entire 14-hour period behind the wheel. There are simply too many naturally occurring personal and occupational demands that would require the driver's presence elsewhere. The FMCSA stated, therefore, that regularizing such personal time away from driving would not be a burden on productivity and would empower drivers to insist upon necessary break time.

ATA's Recommendation

Behind the ATA's recommendation in converting to a 24-hour work/rest cycle was apparently the understanding that whereas 10 consecutive hours would belong to the driver, the remaining 14 hours belonged to the carrier. In the NPTC proposal, only nine hours would belong to the driver. As noted earlier, an aspect of the ATA recommendation that the FMCSA considered problematic is that personal breaks taken by the driver during the 14-hour block would only extend that block thereby upsetting the integrity of a recurring 24-hour work/rest cycle.

Other Industry Comments

Industry was uniformly opposed to mandatory rest breaks for a variety of reasons. The theme running through the comments was that the requirement is unnecessary.

The ATA advised the agency to promote, but not mandate, rest breaks that do not diminish driver's work time.

The PMTA commented that requiring rest breaks would cause driver shortages. PMTA stated there is enough time in the day for drivers to rest, if necessary, while maintaining a productive schedule. It also contended that the proposed rules do not enable drivers to take advantage of downtime at loading docks.

The NPTC asserted that mandating breaks interferes with the carrier's ability to manage distribution schedules. It also argued that the paucity of available rest areas would make it difficult to find a place to take breaks.

The National Soft Drink Association stated that required breaks adding up to two hours for Types 1, 2, and 5 are