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United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued April 13, 2004

Decided July 16, 2004

No. 03-1165

PUBLIC CITIZEN, ET AL.,
PETITIONERS

v.

FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION,
RESPONDENT

DISTRIBUTION LTL CARRIERS ASSOCIATION, INC., ET AL.,
INTERVENORS

On Petition for Review of an Order of the
United States Department of Transportation

Bonnie I. Robin-Vergeer argued the cause for petitioners. With her on the briefs were *Brian Wolfman*, *Scott L. Nelson*, and *Allison M. Zieve*. *Alan B. Morrison* entered an appearance.

Bills of costs must be filed within 14 days after entry of judgment. The court looks with disfavor upon motions to file bills of costs out of time.

Henry M. Jasny was on the brief for *amicus curiae* Advocates for Highway and Auto Safety in support of petitioners.

Stephen L. Oesch, Shari T. Kendall, and Michele McDowell Fields were on the brief for *amicus curiae* Insurance Institute for Highway Safety in support of petitioners.

Matthew M. Collette, Attorney, U.S. Department of Justice, argued the cause for respondent. With him on the brief were *Peter D. Keisler*, Assistant Attorney General, *Robert S. Greenspan* and *Tara Leigh Grove*, Attorneys, *Jeffrey A. Rosen*, General Counsel, U.S. Department of Transportation, *Paul M. Geier*, Assistant General Counsel, *Peter J. Plocki*, Senior Trial Attorney, and *Brigham A. McCown*, Chief Counsel, Federal Motor Carrier Safety Administration.

Robert Digges, Jr. argued the cause for intervenors American Trucking Associations, Inc., et al. With him on the brief were *Erika Z. Jones, Adam C. Sloane, and David M. Gossett. Robert A. Hirsch* and *Kevin M. Williams* entered appearances.

Before: EDWARDS, SENTELLE and TATEL, *Circuit Judges*.

Opinion for the Court filed by *Circuit Judge* SENTELLE.

SENTELLE, *Circuit Judge*: Public Citizen and other “public interest” groups (collectively “Public Citizen” or “petitioners”) seek review of a final rule of the Federal Motor Carrier Safety Administration (“FMCSA” or “the agency”) revising existing hours of service (“HOS”) regulations limiting the hours of driving and work of commercial motor vehicle operators. For the reasons more fully set out below, we agree with petitioners that the rulemaking was arbitrary and capricious, because the FMCSA failed to take account of a statutory limit on its authority. We therefore grant the petition for review and vacate the rule.

I.

A. Regulatory Background

For years, federal regulators have limited the hours of service that truckers, as well as other operators of various

vehicles in the transportation industry, can work and operate their motorized conveyances. The FMCSA, created by statute in 1999, is the agency charged with promulgating HOS rules regulating drivers of commercial motor vehicles. When Congress created the FMCSA, it provided as follows:

In carrying out its duties, the [FMCSA] shall consider the assignment and maintenance of safety as its highest priority, recognizing the clear intent, encouragement, and dedication of Congress to the furtherance of the highest degree of safety in motor carrier transportation.

42 U.S.C. § 113. Before Congress created the FMCSA, the Federal Highway Administration (“FHA”) was responsible for such rules.

In 1995, Congress ordered the FHA to revise the existing commercial motor vehicle HOS rules. Specifically, it provided that the FHA

shall issue an advance notice of proposed rulemaking dealing with a variety of fatigue-related issues pertaining to commercial motor vehicle safety (including 8 hours of continuous sleep after 10 hours of driving, loading, and unloading operations, automated and tamper-proof recording devices, rest and recovery cycles, fatigue and stress in longer combination vehicles, fitness for duty, and other appropriate regulatory and enforcement countermeasures for reducing fatigue-related incidents and increasing driver alertness).

49 U.S.C. § 31136 note. The FHA never issued the required notice of rulemaking, and so it fell to the FMCSA to do the job.

In May 2000, the FMCSA, in a formal notice published in the Federal Register, proposed a new set of commercial motor vehicle HOS rules. 65 Fed. Reg. 25,540 (2000) (“NPR”). Though the rules regulate all cargo-carrying commercial motor vehicles, the petition before us addresses the impact of the rule on long-haul truck drivers. The FMCSA promulgated those rules pursuant to, among other statutes, 49 U.S.C. § 31136 and § 31506, which are part of the Motor Carrier Act

of 1935 and the Motor Carrier Safety Act of 1984. Section 31136 provides, in relevant part:

(a) Minimum safety standards . . . At a minimum, the [HOS] regulations shall ensure that—

(1) commercial motor vehicles are maintained, equipped, loaded, and operated safely;

(2) the responsibilities imposed on operators of commercial motor vehicles do not impair their ability to operate the vehicles safely;

(3) the physical condition of operators of commercial motor vehicles is adequate to enable them to operate the vehicles safely; and

(4) the operation of commercial motor vehicles does not have a deleterious effect on the physical condition of the operators.

Section 31506(d) provides:

Before prescribing or revising any [HOS] requirement, [the FMCSA] shall consider the costs and benefits of the requirement.

The NPR proposed to revise the existing HOS commercial motor vehicle regulations, which had been in place (with some revisions) since 1962. The old rules had placed limits on the number of hours truckers could drive daily without off-duty time, and the number of hours truckers could work weekly during seven or eight consecutive days and still drive, with some exceptions not relevant here. *See* 49 C.F.R. § 395.3 (2002) (superseded). These were limits on the time drivers could work *and still drive*; so far as the rules went, drivers who worked more than the daily or weekly limits could still *work* as long as they did not *drive*. The daily limits prohibited truckers from driving more than ten hours without taking eight hours of off-duty time or from driving after fifteen hours “on duty” without taking eight hours of off-duty time. *Id.* § 395.3(a)(1), (2). Drivers, however, could take periodic “off-duty” breaks during the day, thus extending the fifteen-hour driving-eligible “on duty” period beyond fifteen hours. The rules also permitted drivers to obtain the necessary eight

nominally “consecutive” hours’ sleep by resting in a “sleeper berth,” an enclosed compartment in the cargo space of a truck with space for drivers to sleep. Drivers could obtain their rest in sleeper berths in two separate periods totaling eight hours, each of which was at least two hours long. *Id.* § 395.1(g). That meant that a long-haul truck driver could satisfy regulatory requirements, for example, by driving six hours, resting for five in his attached sleeper-berth, driving another four, and resting another three hours. (The parties refer to this feature of the old rules as the “sleeper-berth exception.”) The weekly driving limits prohibited driving after having been on duty for sixty hours in seven consecutive days, or seventy hours in eight consecutive days. *Id.* § 395.3(b). To enforce these requirements, the old rules required drivers to maintain log books recording their hours and duty status, and subjected drivers to roadside inspections of the books. *Id.* § 395.8.

B. The Proposed Rule

The FMCSA proposed a significant revision to these rules in the 2000 NPR. It based these revisions on some general scientific conclusions regarding the consequences of sleep deprivation among commercial motor vehicle operators. It noted that research showed that people are much more alert and have better reaction times when they are on regular, twenty-four-hour circadian schedules, as humans are “programmed” to function best when they go to sleep and wake up around the same time every day. 65 Fed. Reg. at 25,553–54. These effects place nighttime drivers in a physiologically vulnerable position, the agency concluded, because they must sleep during the day, when their bodies are least receptive to sleep, and work during the night, when they are physiologically and cognitively least able. That vulnerability of drivers, in turn, creates a substantial risk of substandard and potentially unsafe driving performance on the part of drivers unless they obtain regular and sufficient restorative sleep. *Id.* at 25,554. To avoid these problems, the agency concluded that drivers should get, at a minimum, “eight consecutive hours of uninterrupted sleep every day.” *Id.*

Accordingly, the agency proposed several revisions to the existing HOS commercial motor vehicle driver regulations. For long-haul truckers, the agency proposed to limit daily on-duty and driving time to twelve hours, with two additional hours off sometime during the workday, providing for a maximum workday of fourteen hours. *Id.* at 25,581. (Separate rules applied to other categories of commercial motor vehicle drivers.) The NPR proposed requiring drivers to get ten consecutive hours of off-duty time after a fourteen-hour workday, putting drivers on a twenty-four-hour cycle, assuming they maximized work time and minimized off-duty time. *Id.*

There were at least three justifications for the increase in mandatory off-duty time and the decrease in permissible on-duty time. The first was the need to increase the old rules' eighteen-hour on-duty/off-duty work cycle to a twenty-four hour cycle; the old rules had permitted an eighteen-hour cycle by requiring only eight hours of off-duty time after ten hours of driving. The change to a twenty-four hour maximum cycle, the agency reasoned, better approximated circadian rhythms. The second was the need to allow enough time for drivers to get sufficient continuous sleep. The old rules, by requiring only eight hours of off-duty time, concluded the agency, had not allowed drivers to obtain seven or eight hours' sleep, because drivers had to spend much of this off-duty time on daily personal tasks, such as commuting, eating meals, running personal errands, and having a family and social life. *Id.* at 25,554. The last justification was the agency's conclusion that the risk of a driver crashing "increases markedly after the 12th hour of any duty time during the work shift," which justified limiting daily on-duty and driving time to twelve hours. *Id.* at 25,556.

The agency also proposed to modify the old rules' sleeper-berth exception. Citing research showing that split-sleep was less restorative than continuous sleep, the agency proposed to eliminate the exception for solo drivers. *Id.* at 25,586. That would mean that solo drivers could no longer accumulate the required amount of off-duty time by splitting their time in a sleeper berth. The agency proposed to retain the exception

for team drivers, but increased the minimum sleeper-berth period from two to five hours. *Id.* at 25,587. The proposal, in addition, no longer allowed drivers to extend their “on-duty” period by taking periodic breaks during the day and instead provided for a mandatory off-duty period of two hours. It counted any additional break time against drivers’ total on-duty driving-eligible time.

The rule proffered in the NPR also would have required drivers to take a mandatory “weekend” of thirty-two to fifty-six hours off-duty each week, covering two consecutive periods from 12 a.m. to 6 a.m. *Id.* at 25,581, 25,568 tbl. 5, 25,587–88. This additional recovery period was necessary, according to the agency, to compensate for sleep debts drivers accrue during each weeks’ work. *Id.* at 25,555–56. In addition, the weekend would ensure that drivers have an opportunity to sleep during two nighttime periods each week – “circadian-optimal times” – and prevent drivers from having to work five consecutive night shifts. *Id.* at 25,557–58.

Finally, the proposed rule would have required truckers to use electronic onboard recorders (“EOBRs”) instead of logbooks to monitor their adherence to the new regulatory requirements. *Id.* at 25,598. Those recorders would automatically monitor the date, driving distance per day, on- and off-duty time, start time, and would have a continuous time scale. *See id.* at 25,606. Drivers would not be permitted to edit the recorded figures. The agency proposed requiring such recorders because it determined that falsification of logbooks, the only form of compliance monitoring mandated by the old rules, was widespread. *Id.* at 25,558.

C. The Final Rule

The eventual rule, promulgated in April 2003, was still a significant revision to the old rules, but differed markedly from the NPR. *See* 68 Fed. Reg. 22,456 (2003). The new rule prohibited truckers from driving without ten hours of off-duty time after fourteen hours of starting work and limited daily driving time during that work period to eleven hours. *Id.* at 22,457. As compared to the old rules, those limits increased the required off-duty time from eight to ten hours,

decreased the total permissible driving-eligible workday from fifteen to fourteen hours, but increased the total maximum daily possible driving from ten to eleven hours. The new rules also eliminated a loophole in the old rules. As discussed, the old rules had allowed drivers to extend the fifteen-hour duty period by taking breaks throughout the day, allowing them to drive after having been at work much more than fifteen hours. By prohibiting driving fourteen hours after *starting work*, rather than after fourteen hours “on duty,” the new rules eliminated this loophole and prohibited driving after fourteen hours of work, including on-duty breaks. Unlike the rule proposed in the NPR, however, the final rule did not require a mandatory two-hour break during the day.

This regulatory framework set drivers’ schedules at a twenty-one-hour daily cycle for those who drove the maximum number of hours (eleven) and then took the minimum possible number of off-duty hours (ten). Drivers who worked – both by driving and other tasks – the maximum possible on-duty driving-eligible time (fourteen hours), however, had a twenty-four-hour daily cycle if they maximized working hours and minimized off-duty time (ten hours). Following the research cited in the NPR, the agency recognized a “general agreement on the concept of a 24-hour work/rest cycle,” i.e., the body’s natural circadian rhythms. *Id.* at 22,469. The agency, however, justified not requiring all drivers to operate on a twenty-four-hour cycle by saying that such a rule would unduly disrupt the trucking industry, though it conceded that such a rule would be “ideal from a scientific viewpoint.” *Id.* Still, the agency noted that its framework “move[d] toward a 24-hour work/rest cycle” while minimizing the costs of making the rule “inflexible.” *Id.*

The agency also considered, and rejected, the NPR’s proposed mandatory “weekend” at the end of each work week, although it retained the old rules’ prohibition of driving after more than sixty hours of on-duty time during a seven-day period, and after more than seventy hours of on-duty time during an eight-day period. *Id.* at 22,502. The mandatory weekend requirement, the agency implied, “would create

havoc on the already overcrowded highways in the daylight hours,” by restricting nighttime driving. *Id.* at 22,477. Instead of a mandatory weekend, the agency allowed a thirty-four-hour “restart” provision. *Id.* at 22,502. This provision permitted drivers to “restart” their work week after taking thirty-four consecutive hours off-duty, meaning that they could work a new seven- or eight-day consecutive driving period that comported with the weekly maximum hour limits. The agency justified the restart provision by arguing that thirty-four hours was enough to allow drivers to obtain seven or eight hours of uninterrupted sleep on each of two consecutive days, thereby allowing them to obtain adequate restorative sleep and freeing them to start driving anew as part of a sixty- or seventy-hour work week. *Id.* at 22,479.

As compared to the old rules, the restart provision increased the number of hours truckers could work per week. The old rules had capped the number of hours a trucker could drive after working each week at sixty (or seventy for eight days) regardless of whether a trucker got thirty-four hours’ consecutive rest during the week. The new rules, by contrast, allowed drivers to work more hours if they took thirty-four hours off before the close of the weekly limits. A driver could work seventy-seven hours over seven days, for example, by working twenty-one hour-driving/rest rotations seven days a week, assuming the driver took thirty-four consecutive hours off after driving the maximum fifty-five hours and took the minimum forty hours off over the first four calendar days.

The final rule also revised the NPR’s proposed restructuring of the sleeper-berth exception. The NPR had proposed eliminating that exception for solo drivers but retaining it, in modified form, for team drivers. The agency ultimately decided that this was unwise. It decided to allow drivers to obtain the required ten hours’ rest in exactly two chunks, one of which was at least two hours long (in contrast to the five-hour minimum the NPR’s recommendation would have required for team drivers). 49 C.F.R. § 395.1(g) (2003). The NPR’s rule would have instead required that solo drivers take ten continuous hours off duty, whether spent in a sleeper berth or not.

In retaining the sleeper-berth exception for solo drivers, the agency reasoned that the “proximity and convenience” of the berths for truckers reduced the importance of having a longer rest period for drivers who sleep in berths. 68 Fed. Reg. at 22,466. A longer period, the agency worried, would be unduly inflexible, as it would require a driver who sleeps for seven hours in a berth to refrain from working another three hours. *Id.* The final rule noted, too, that ninety percent of truckers currently use sleeper berths, and that their use “is firmly entrenched in the practice, culture, and equipment of the trucking industry.” *Id.* The agency also cited a lack of evidence that retaining the sleeper-berth exception was a safety hazard, and concluded that the existing studies that purported to show that dividing sleep in berths was dangerous were actually inconclusive. *Id.* at 22,465–66.

The agency altered the proposed rule on yet another point. The NPR had proposed requiring truckers to install EOBRs to monitor compliance with the rules; in the final rule the FMCSA decided not to do so “at this time,” but instead to continue relying on logbooks. *Id.* at 22,488. The agency reasoned that there was insufficient evidence regarding the costs and benefits of requiring EOBRs. *Id.* The agency also was concerned that it would be difficult to standardize EOBRs and that they would be expensive. *Id.* Finally, the agency cited concerns that the recorders would be unduly intrusive. *Id.*

This petition for review followed.

II.

Petitioners claim that the final rule is arbitrary and capricious in several respects. We review the adequacy of the agency’s reasoning under the familiar standard of *Motor Vehicle Manufacturers Association v. State Farm Mutual Life Insurance Co.*, 463 U.S. 29, 41–44 (1983). That requires us to ensure that the agency made a “rational connection between the facts found and the choice made.” *Id.* at 43 (internal quotation marks and citation omitted). We agree with petitioners that the rule is arbitrary and capricious

because the agency failed to consider the impact of the rules on the health of drivers, a factor the agency must consider under its organic statute. Because the agency has wholly failed to comply with this specific statutory requirement, this single objection from petitioners is sufficient to establish an arbitrary-and-capricious decision requiring vacatur of the rule.

Several of petitioners' other objections also raise troubling concerns about the decisionmaking process. We do not, however, enter final judgment on those, as we are vacating and remanding the matter in any case and the agency will be free in its further proceedings to consider the other objections anew in light of this opinion and its own responses to the driver health requirement.

A. Driver Health

We hold that the final rule is arbitrary and capricious because the agency neglected to consider a statutorily mandated factor – the impact of the rule on the health of drivers. In promulgating “regulations on commercial motor vehicle safety,” and HOS regulations are undoubtedly on that exact subject, the FMCSA is required “[a]t a minimum [to] ensure that . . . the operation of commercial motor vehicles does not have a deleterious effect on the physical condition of the operators.” 49 U.S.C. § 31136(a)(4). As the Supreme Court stated in *State Farm*, an agency’s rule normally is arbitrary and capricious if it “entirely failed to consider an important aspect of the problem” before it. 436 U.S. at 43. A statutorily mandated factor, by definition, is an important aspect of any issue before an administrative agency, as it is for Congress in the first instance to define the appropriate scope of an agency’s mission. When Congress says a factor is mandatory, that expresses its judgment that such a factor is important. In accordance with this principle, we have held that “the complete absen[c]e of any discussion” of a statutorily mandated factor “leaves us with no alternative but to conclude that [the agency] failed to take account of this statutory limit on [its] authority,” making the agency’s reasoning arbi-

trary and capricious. *United Mine Workers v. Dole*, 870 F.2d 662, 673 (D.C. Cir. 1989).

The FMCSA points to nothing in the agency's extensive deliberations establishing that it considered the statutorily mandated factor of drivers' health in the slightest. Instead, the agency states that "[t]he statute does not require the agency to protect driver health to the exclusion of other considerations such as the costs and benefits of the proposed regulation." FMCSA Br. at 54–55. But neither petitioners nor the court suggests that the statute requires the agency to protect driver health *to the exclusion* of those factors, only that the agency must consider it. So far as the record reveals, it did not.

The FMCSA's only effort to show that it did consider driver health is to point out that it considered the effect of driver health on vehicle safety and to argue that consideration of the health of drivers therefore "permeated the entire rulemaking process." FMCSA Br. at 55. But the statute requires the agency to consider the impact of the rule on "the physical condition of the operators," not simply the impact of driver health on commercial motor vehicle safety. 49 U.S.C. § 31136(a)(4). Under the statute, vehicle safety is a distinct factor the agency must consider, so considering the effect of driver health on safety cannot be equal to considering the impact on the physical condition of the operators. *Id.* § 31136(a)(2), (3). It is one thing to consider whether an overworked driver is likely to drive less safely and therefore cause accidents. Whether overwork and sleep deprivation have deleterious effects on the physical health of the driver is quite another. This is not to suggest that the two factors are unrelated: healthy drivers presumably cause fewer accidents and conversely drivers who have fewer accidents suffer fewer injuries. However, the relatedness of the concept discussed to the statutorily mandated factor that the agency does not discuss does not relieve the agency of the duty of compliance with the congressional instruction.

It may be the case, for example, that driving for extended periods of time and sleep deprivation cause drivers long-term

back problems, or harm drivers' immune systems. The agency may of course think that these and other effects on drivers are not problematic (or are outweighed by other considerations, like cost), but if so it was incumbent on it to say so in the rule and to explain why. Its failure to do so, standing alone, requires us to vacate the entire rule as arbitrary and capricious, as the agency's failure to consider this factor, to borrow a phrase from the agency's brief, "permeated the entire rulemaking process."

B. Other Concerns with the Rule

As we said above, we will not render final decision on petitioners' other objections to the rule, as the failure of the agency to consider the statutorily mandated factor is dispositive and especially because the agency's handling of the other factors may be different after reconsideration in light of whatever decisions it may reach with respect to the effect of the rule on driver health on remand. We nonetheless note, for a sense of completeness, the troubling nature of these other facets of the rulemaking.

1. Increase in Maximum Driving Time from Ten to Eleven Hours

Petitioners challenge the rationality of the agency's decision to increase the maximum permissible daily driving time from ten to eleven hours. This challenge illustrates the relatedness of the entire rulemaking to the statutorily mandated driver-health factor upon which we are turning our decision. While the challenge to the increase in driving time is distinct, and theoretically could be the basis of the granting of a petition for review by itself, it is also a factor that the agency may wish to consider anew in weighing the effects of the rulemaking on the physical condition of drivers.

In any event, petitioners' challenge raises very real concerns. The old HOS regulations, as we have discussed, had prohibited truckers from driving more than ten hours without taking eight hours off during the day and had limited truckers' driving-eligible time to fifteen hours "on duty" without taking eight hours of off-duty time. While the final rule

increased the minimum amount of off-duty time from eight to ten hours, and decreased permissible driving-eligible on-duty time from fifteen to fourteen hours, it increased the maximum permissible daily driving time from ten to eleven hours.

The agency had essentially two justifications for increasing maximum daily driving time. It said that the increase was justified by the decrease in overall daily driving-eligible “tour of duty” from fifteen to fourteen hours. 68 Fed. Reg. at 22,473. It also said that the increase in mandatory off-duty time from eight to ten hours justified the increase in daily driving time in light of the cost-benefit analysis it had conducted. *Id.* at 22,471.

We have our doubts about whether these two justifications are legally sufficient. The agency freely concedes that “studies show[] that performance begins to degrade after the 8th hour on duty and increases geometrically during the 10th and 11th hours” on duty. *Id.* Despite this finding, the agency cited absolutely no studies in support of its notion that the decrease in daily driving-eligible tour of duty from fifteen to fourteen hours will compensate for these conceded and documented ill effects from the increase.

The agency did refer generally to studies, but that generalized reference is of doubtful legal sufficiency. The agency in particular stated that it “relie[d] upon 12 studies to select a 10 consecutive hour off-duty [sic] period, a 14-hour tour of duty, and a maximum of 11 hours of driving” and noted that an annotated literature review of those studies is in the rulemaking docket. *Id.* at 22,473. But the agency never stated *which* particular studies in fact justify the increase, much less *how* they do so. Unlike the discussion in the rule, the agency’s brief before this court does cite several studies with particularity; but those citations cannot save the rule. The expertise of the agency, not its lawyers, must be brought to bear on this issue in the first instance. *See SEC v. Chenery*, 318 U.S. 80, 87–88 (1943).

Moreover, although the agency is correct that it decreased the maximum daily driving-eligible on-duty time, the agency also, as discussed above, increased the maximum weekly on-

duty time for those drivers maximizing weekly driving time and who take advantage of the thirty-four-hour restart provision. Even assuming that the agency had adequately documented the beneficial effects from the decreased daily driving-eligible “tour of duty,” the effects from the increased weekly driving hours may offset any decrease in fatigue flowing from the fact that drivers have shorter over-all tours of duty. For these two reasons, it is unlikely that we would find the agency’s first explanation legally sufficient.

The agency’s second justification is also dubious. That explanation relies on the cost-benefit analysis it conducted. The analysis purports to show that the benefits from the rule outweigh its costs, given that the agency increased (as compared to the old HOS regulations) mandatory daily off-duty time from eight to ten hours. But this analysis assumes, dubiously, that time spent driving is equally fatiguing as time spent resting – that is, that a driver who drives for ten hours has the same risk of crashing as a driver who has been resting for ten hours, then begins to drive. 68 Fed. Reg. at 22,497. In other words, the model disregarded the effects of “time on task” because, the agency said, it did not have sufficient data on the magnitude of such effects. *Id.*

This assumption makes the cost-benefit analysis of questionable value in justifying the increase in daily driving time. The exponential increase in crash risk that comes with driving greater numbers of hours, presumably caused by time-on-task effects, raises eyebrows about the agency’s increase of daily driving time. Yet the agency excluded time-on-task effects from the cost-benefit analysis. That analysis, then, assumes away the exact effect that the agency attempted to use it to justify. The agency’s reliance on the cost-benefit analysis to justify this increase is therefore circular, and the rationality of that explanation is correspondingly doubtful.

Quite apart from the circularity of the agency’s explanation, moreover, the model’s assumption that time-on-task effects are nil is implausible. Again, the agency admits that studies show that crash risk increases, in the agency’s words, “geometrically,” *id.* at 22,471, after the eighth hour on duty, and

the agency does not deny that this geometric risk increase results at least in substantial part from time-on-task effects. The mere fact that the magnitude of time-on-task effects is *uncertain* is no justification for *disregarding* the effect entirely. The agency, for example, could have extrapolated the time-on-task effects of driving longer hours using crash-risk data derived from drivers who drove for shorter periods of time. In light of this dubious assumption, the agency's cost-benefit analysis is questionable, and, as a consequence, so is its justification for increasing maximum driving time from ten to eleven hours.

2. Sleeper–Berth Exception

Our doubts extend as well to the agency's justification for retaining the sleeper-berth exception. The final rule, again, permits solo and team drivers to obtain the necessary ten hours of off-duty time by splitting their rest in two periods of time spent in sleeper berths, at least one of which is two hours long. 49 C.F.R. § 395.1(g) (2003). Petitioners argue persuasively that the agency's justification for retaining this exception was not rational in view of the conceded central premise of the HOS regulations, shared by the NPR and the final rule, that “[e]ach driver should have an opportunity for eight consecutive hours of uninterrupted sleep every day.” 68 Fed. Reg. at 22,469.

Despite that premise, the agency offered several justifications for nevertheless permitting drivers to obtain the required continuous period of rest in two chunks, all of which are quite weak. First, the agency cited two studies, Dingus et al., *Impact of Sleeper Berth Usage on Driver Fatigue* (2002); and Wylie et al., *Commercial Motor Vehicle Driver Fatigue and Alertness Study* (1996). 68 Fed. Reg. at 22,465. The agency cited the first study for the proposition that “[s]tudies on the sleeper berth issue have generally found that, for a number of reasons, sleeping in a berth, particularly when the vehicle is moving, is less restorative than sleeping in a bed.” *Id.* at 22,464. The agency also noted that team drivers used sleeper berths more effectively than solo drivers did. *Id.* at 22,465.

It is not clear how the Dingus study could rationally justify retaining the sleeper-berth exception. The conclusions that the agency draws from the study either do not support retaining the exception or have nothing to do with the problem of sleeper-berth rest. For one, the agency's citation to the study for the idea that sleeping in a berth is less restorative than sleeping in a bed supports eliminating, not retaining, the exception. Similarly, the agency's observation that solo drivers less effectively use sleeper berths than do team drivers also supports eliminating the exception for solo drivers, as the rule proposed in the NPR would have. For another, a study *comparing* the effects of sleeper berth usage on team drivers and solo drivers says little about whether, as an *absolute* matter, retaining the exception is safe. Congress directed the FMCSA to ensure that "commercial motor vehicles are . . . operated safely," 49 U.S.C. § 31136(a)(1), not to ensure that commercial motor vehicles driven by team drivers are safe relative to those driven by solo drivers. The Dingus study, in short, is weak justification for retaining the exception.

The agency's use of the Wiley study is also difficult to understand. The Wiley study did not even evaluate the problem of sleeper-berth sleep, much less *split* sleeper-berth sleep; the drivers in that study slept in hospitals and motels, not sleeper berths. The Wiley study thus is also weak evidence that retaining the sleeper-berth exception is appropriate.

The other justifications the agency used to justify the sleeper-berth exception are also unimpressive. The agency noted that "the proximity and convenience of the sleeper-berth reduces the importance of the length of the uninterrupted period." *Id.* at 22,466. That says nothing about whether drivers should be able to *split* their rest in a sleeper berth; at most, it would justify *reducing the required length* of continuous rest *if* a driver spends the time in a berth, which the rule does not do. The agency also said that "[u]se of sleeper berths in long-haul operations is firmly entrenched in the practice, culture, and equipment of the trucking industry," and that therefore to eliminate the sleeper-berth excep-

tion “would require more documented evidence of a safety problem than the agency now has.” *Id.* This is another nonsequitur. Eliminating the sleeper-berth exception would not prevent drivers from using sleeper berths. It would only prevent them from splitting their rest in them.

In sum, we have grave doubts about whether the agency’s explanation for retaining the sleeper-berth exception would survive arbitrary-and-capricious review.

3. EOBRs

The agency’s justification for not requiring EOBRs to monitor driver compliance is another aspect of the final HOS rule of questionable rationality. Recall that the agency had, in the NPR, proposed to require commercial motor vehicle companies to use EOBRs to monitor driver compliance. The final rule decided not to require EOBRs “at this time.” *Id.* at 22,488.

The agency gave three primary reasons for not doing so. First, the agency said that “neither the costs nor the benefits of EOBR systems are adequately known,” because there is no “significant market” for the devices, and because the amount of HOS-noncompliance that EOBRs would detect is unknown, as the agency “did not test the (very few) EOBRs currently available.” *Id.* Second, the agency said that because the NPR’s proposed EOBR requirement was drafted as a performance, not a design, standard, enforcement officials “would have to waste time and effort mastering incompatible read-out procedures created by different EOBR vendors,” and that the solution to this problem “at least for now, is to adopt a rule that does not require EOBRs.” *Id.* Finally, the agency stated that drivers see EOBRs as a “direct assault on their dignity and privacy,” and that the information recorded in EOBRs could be used in lawsuits against trucking companies. *Id.* at 22,489.

This explanation is probably flawed. In section 408 of the Interstate Commerce Commission Termination Act of 1995, 49 U.S.C. § 31136 note, Congress directed the FMCSA to issue

an advance notice of proposed rulemaking dealing with a variety of fatigue-related issues pertaining to commercial

motor vehicle safety (including 8 hours of continuous sleep after 10 hours of driving, loading, and unloading operations, *automated and tamper-proof recording devices*, rest and recovery cycles, fatigue and stress in longer combination vehicles, fitness for duty, and other appropriate regulatory and enforcement countermeasures for reducing fatigue-related incidents and increasing driver alertness).

(emphasis added). This directive, in our view, required the agency, at a minimum, to collect and analyze data on the costs and benefits of requiring EOBRs. “Deal[] with,” in the sense meant here, means “to take action with regard to someone or something.” Merriam Webster’s Collegiate Dictionary 296 (10th ed. 1995). Because the agency is required to ensure that “commercial motor vehicles are maintained, equipped, loaded, and operated safely,” 49 U.S.C. § 31136(a)(1), and because the agency is also required to “consider the costs and benefits” of HOS regulations, *id.* § 31506(d), the “action” undoubtedly meant here means, at a minimum, fulfilling the agency’s statutory duty to weigh the costs and safety benefits of requiring EOBRs. (Although the statutory requirement applies by its terms to “an advance notice of proposed rulemaking,” we think the implication plain that the final rule, necessarily derived from the NPR, is subject to the same requirement.) True, as the agency points out, this statutory provision does not require the agency to promulgate a rule that requires the use of EOBRs; but it does require the agency to evaluate seriously whether EOBRs should be required.

The agency’s explanation in all likelihood does not conform to this statutory requirement. The agency said that the costs and benefits of EOBRs are unknown, because cost estimates “vary enormously.” But nothing prevented the agency from itself estimating the costs. The agency’s job is to exercise its expertise to make tough choices about which of the competing estimates is most plausible, and to hazard a guess as to which is correct, even if the lack of a “significant market for such devices” means that the estimate will be imprecise. Regulators by nature work under conditions of serious uncertainty,

and regulation would be at an end if uncertainty alone were an excuse to ignore a congressional command to “deal[] with” a particular regulatory issue.

A similar problem infects the agency’s discussion of the benefits of EOBRs. The agency concedes that it “did not test the (very few) EOBRs currently available.” The agency offers no excuse for not doing so, and we can think of none that would suffice to fulfill the agency’s duty to “deal[] with” the issue of EOBRs. Given the large incentives truckers have to falsify their logbooks, incentives confirmed by the agency’s recognition in the NPR that noncompliance with HOS regulations is “widespread,”¹ 65 Fed. Reg. at 25,567, noncompliance with HOS regulations is no doubt a serious regulatory problem, as the agency and its lawyers do not deny. It stands to reason that requiring EOBRs will have substantial benefits by inducing compliance with HOS regulations, and the agency concedes that compliance with HOS regulations has benefits. It is therefore facially plausible that EOBRs will have substantial safety benefits, and it was incumbent on the agency at least to attempt to analyze those benefits.

We cannot fathom, therefore, why the agency has not even taken the seemingly obvious step of testing existing EOBRs on the road, or why the agency has not attempted to estimate their benefits on imperfect empirical assumptions. (The agency, as we have discussed, apparently had no problem making estimates based on imperfect empirical assumptions when it estimated the costs of increasing driving time from ten to eleven hours.) The agency is no doubt correct that the “amount of cheating that could be deterred by EOBRs is unknown,” *id.* at 22,488, but this lack of knowledge is willful,

¹ Driver noncompliance with federal regulation in this and related areas might be described as the stuff of legend. *See, e.g.*, E. Green and C. Montgomery, “*Six Days on the Road*”:

The I.C.C. is a-checkin on down the line.
Well, I’m a little overweight and my log books are way behind.
But nothing bothers me tonight, I can dodge all the scales all right,
Six days on the road, I’m gonna make it home tonight.

given that the agency has not even attempted testing of the existing units. As petitioners stress, the agency has provided for voluntary use of EOBRs among truckers for over fifteen years, *see* 49 C.F.R. § 395.15, so such testing is in all probability eminently possible. The agency has offered no good reason for treating this problem with such passivity.

Without such a cost-benefit analysis, accounting for benefits as well as costs, we do not understand how the remainder of the agency's explanation, all of which focuses solely on the costs of the rule, could pass muster in this court on petition for review. The second and third primary justifications for not requiring EOBRs – that implementing a performance, rather than a design, standard might be difficult, and that EOBRs might be unduly intrusive – might well be outweighed by the benefits of requiring EOBRs in the first place. We and the agency, however, have no idea whether they would, because the agency has not bothered to study what benefits EOBRs might have. This one-sided and passive regulatory approach in all likelihood does not comport with Congress's direction for the agency to “deal[] with” this issue in light of the statutorily mandated factors for which it has provided.

4. Thirty-Four-Hour Restart

One further problematic aspect of the agency's explanation for the rule concerns the thirty-four-hour restart provision. As discussed, this provision has the effect of increasing the maximum number of hours drivers can work each week. The agency justified the restart on the ground that after having thirty-four hours of rest, drivers have the opportunity to get seven-to-eight hours of continuous rest, and because the restart will help drivers keep a regular schedule. 68 Fed. Reg. at 22,479. For example, if a driver gets off work at 8 p.m. Saturday after starting work that day at 6 a.m. (a fourteen-hour day), the thirty-four-hour restart would allow him to restart work at 6 a.m. Monday, thus allowing him to start work at the same time of day he started on Saturday. Moreover, continued the agency, the restart provision will enable drivers the flexibility to take their sleep during the

day, and enable them to drive at night, when the number of cars on the road is fewest. *Id.*

While the agency's explanation seems sound enough as far as it goes, it does not even acknowledge, much less justify, that the rule, as petitioners point out and as explained above, dramatically increases the maximum permissible hours drivers may work each week. That increase is likely an "important aspect of the problem." *State Farm*, 436 U.S. at 43. And the agency's failure to address it, accordingly, makes this aspect of the rule's rationality questionable.

III. Conclusion

For the reasons given above, we vacate the rule in its entirety and remand to the agency for proceedings consistent with this opinion.