

2011

Flightcrew Member Duty and Rest Requirements: Does the Proposed Legislation Put to Rest the Concern over Pilot Fatigue

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Recommended Citation

Natalie N. DuBose, *Flightcrew Member Duty and Rest Requirements: Does the Proposed Legislation Put to Rest the Concern over Pilot Fatigue*, 76 J. AIR L. & COM. 253 (2011)
<https://scholar.smu.edu/jalc/vol76/iss2/3>

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FLIGHTCREW MEMBER DUTY AND REST REQUIREMENTS: DOES THE PROPOSED LEGISLATION PUT TO REST THE CONCERN OVER PILOT FATIGUE?

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I.	INTRODUCTION.....	254
A.	FATIGUE	255
B.	COMMUTING	256
C.	FAA REGULATION: PAST AND PRESENT	259
II.	OVERVIEW OF THE PROPOSED LEGISLATION.	261
A.	FLIGHT TIME AND DUTY PERIOD CHANGES	261
1.	<i>Flight Duty Period</i>	261
2.	<i>Flight Time</i>	264
B.	ELIMINATION OF CARGO CUTOUT	265
C.	REST REQUIREMENTS.....	266
D.	COMMUTING AND FITNESS FOR DUTY	269
E.	AUGMENTATION.....	270
III.	COMPARING THE NPRM TO INTERNATIONAL STANDARDS.....	271
A.	INTERNATIONAL CIVIL AVIATION ORGANIZATION STANDARDS AND RECOMMENDED PRACTICES.....	272
B.	EUROPEAN UNION OPS SUBPART Q	273
C.	UNITED KINGDOM CIVIL AVIATION AUTHORITY PUBLICATION 371 (CAP-371)	275
D.	REGULATIONS TO UNIFY EUROPEAN STANDARDS IN 2012	276
IV.	THE NPRM'S EFFECT ON THE INDUSTRY	279
A.	CARRIERS	279
1.	<i>Commuting Time: Accountability Issues</i>	280
2.	<i>Fitness for Duty: Responsibility Issues</i>	283
3.	<i>Crew Scheduling Changes</i>	284

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4. Cargo Carriers	285
B. FLIGHTCREW MEMBERS	286
1. <i>Increasing Flight Hours: Is This Really Detrimental to Pilots?</i>	286
V. CONCLUSION	287

I. INTRODUCTION

YOU HAVE SCHEDULED a 6 a.m. flight from Chicago to make the early meeting in San Francisco. The 3 a.m. wake-up was especially brutal, but between the commute, check-in, and security, you have made it just in time to make the flight. Even after two cups of coffee, you struggle to stay awake on the long flight west. The alarming reality is that your pilot may be facing the same struggle. His day likely began hours earlier because many pilots and crewmembers do not live in the cities in which they are based.¹ This was the scenario for retired captain Paul Nietz, who woke up at 2:30 a.m. from his home in Michigan to fly to his Chicago home base to report for duty, often a noon departure.² He would return to Chicago exhausted by the time he parked his airplane at night, but would still be due back at work eight hours later, even if he commuted back home.³ A recent study revealed that the majority of commuter pilots have fallen asleep at least once behind the controls.⁴ When working twelve-plus hour workdays, resting during odd hours of the day, and sleeping in unfamiliar and undesirable accommodations are combined,⁵ the trouble facing the airline industry and the Federal Aviation Administration (FAA) over pilot fatigue becomes clear. This comment examines the FAA's 2010 proposal to combat pilot fatigue and addresses its dramatic effect on both the industry and pilots.

Federal Aviation Regulation (FAR) Part 91 requires each crewmember be "fit for duty" prior to commencing a flight.⁶

¹ Scott McCartney, *The Parking Lot Where Pilots Sleep*, WALL ST. J. (April 15, 2010), <http://online.wsj.com/article/SB10001424052702304159304575184053254113646.html>.

² David M. Halbfinger et al., *Pilots' Lives Defy Glamorous Stereotype*, N.Y. TIMES, May 17, 2009, at A1.

³ *Id.*

⁴ Andy Pasztor, *A New Safety Idea: Naps in the Cockpit*, WALL ST. J., Oct. 9, 2009, at A3.

⁵ See Halbfinger, *supra* note 2.

⁶ Flightcrew Member Duty and Rest Requirements, 75 Fed. Reg. 55,874 (proposed Sept. 14, 2010) (to be codified at 14 C.F.R. pt. 117 & 121) [hereinafter NPRM].

"Fit for duty" includes the requirement that a crewmember be properly rested.⁷ Everyone experiences fatigue from time to time, but when a pilot is not well-rested, he compromises his performance and cognitive ability⁸ as well as the safety of the crew and passengers.

A. FATIGUE

The FAA defines fatigue as "a condition characterized by increased discomfort with lessened capacity for work, reduced efficiency of accomplishment, loss of power or capacity to respond to stimulation . . . usually accompanied by a feeling of weariness and tiredness."⁹ A variety of factors cause fatigue, including time of day, amount of recent sleep, amount of time spent awake, and cumulative "sleep debt."¹⁰ Fatigue and sleep deprivation can lead to cognitive impairments, lapses in attention, and slower reaction times, all equating to poor overall performance.¹¹ The sleep-deprived lose approximately 25% of their ability to perform mental tasks per twenty-four-hour period of sleep loss.¹² Thus, in three consecutive days of sleep deprivation, a pilot could be totally ineffective in operating the aircraft, and his judgment would likely be seriously impaired.¹³ Fatigued pilots are "generally unable to judge the extent of their impairment, and [are] likely to have trouble concentrating and following multiple sources of information," according to FAA scientist Tom Nesthus.¹⁴ For cargo pilots, the results can be even more dramatic. One NASA study found that night cargo pilots can lose two hours of sleep per night and accumulate a sleep debt of eight hours or more in a week.¹⁵ They also frequently experi-

⁷ U.S. DEP'T OF TRANSP., FED. AVIATION ADMIN., ADVISORY CIRCULAR: FITNESS FOR DUTY 2-3 (2010) [hereinafter FITNESS FOR DUTY DRAFT AC].

⁸ John A. Caldwell et al., *Utility of Dextroamphetamine for Attenuating the Impact of Sleep Deprivation in Pilots*, 74 AVIATION, SPACE, AND ENVTL. MED. 1125, 1125 (2003).

⁹ G.J. SALAZAR, M.D., FAA CIVIL AEROSPACE MED. INST., FATIGUE IN AVIATION 2, available at http://www.faa.gov/pilots/safety/pilotsafetybrochures/media/Fatigue_Aviation.pdf.

¹⁰ NPRM, *supra* note 6, at 55,855. "Sleep debt is the difference between the amount of sleep a person has received over the past several days, and the amount of sleep they would have received if they got 8 hours of sleep a night." *Id.*

¹¹ Caldwell, *supra* note 8.

¹² *Id.*

¹³ *See id.*

¹⁴ Matthew L. Wald, *Pilots Set up for Fatigue, Officials Say*, N.Y. TIMES, May 14, 2009, at A25.

¹⁵ Capt. David J. Wells, Air Line Pilots Ass'n, Int'l, Flight and Duty Time Issues in Air Cargo Operations: The Call for One Level of Safety 17 (Mar. 31, 2004)

ence inferior sleep because night operations are often unscheduled, forcing them to sleep “on-the-fly” during the day, interfering with their circadian rhythms and adding to fatigue.¹⁶

In the last sixteen years, pilot fatigue has been a contributing factor in 250 fatalities caused by air-carrier accidents.¹⁷ Several scheduling issues common in the industry lead to fatigue, including the number of hours a pilot spends awake prior to duty, inadequate layover sleep opportunities, limited opportunity for recovery sleep, and consecutive night operations.¹⁸ Dr. Mark Rosekind, who conducted a study on pilot fatigue at NASA, found that one in seven pilots who fly overnight flights dozes at the controls.¹⁹ He blames the outdated FAA regulations as the root of the problem.²⁰

The issue of pilot fatigue is amplified when combined with the common practice of commuting. Many pilots commute from remote cities across the country, extending their already long days by several hours.²¹ This practice only adds to the problem, particularly when carriers refuse to allow pilots to nap in the crew lounges at airports when they arrive.²²

B. COMMUTING

The practice of commuting, a foreign concept to many, is a long-standing and arguably necessary practice within the aviation industry. Many pilots—by some reports as many as 70%—commute from their homes across the country to work.²³ A recent National Transportation Safety Board (NTSB) investigation found 20% of pilots were commuting one thousand miles or

[hereinafter Cargo Operations], available at http://www.nts.gov/events/symp_air_cargo/presentations/3.3_ALPA.pdf.

¹⁶ See *id.* at 40–42.

¹⁷ Stephenie Chen, *Pilot Fatigue is Like ‘Having Too Much to Drink’*, CNN.COM (May 15, 2009), http://articles.cnn.com/2009-05-15/travel/pilot.fatigue.buffalo.crash_1_pilot-fatigue-cogan-air-nts-web-site?_s=PM:TRAVEL.

¹⁸ U.S. DEP’T OF TRANSP., FED. AVIATION ADMIN., ADVISORY CIRCULAR: BASICS OF AVIATION FATIGUE 3 (2010) [hereinafter BASICS OF AVIATION FATIGUE AC].

¹⁹ Eric Brazil, *Study: OK for Pilots to Nap*, S.F. EXAMINER, June 23, 1998, at A6.

²⁰ *Id.*

²¹ Halbfinger, *supra* note 2.

²² See *Colgan Air Officials Say Pilot in Buffalo Plane Crash May Have Been Fatigued*, ASSOCIATED PRESS (May 13, 2009, 12:47 PM), http://www.nj.com/news/index.ssf/2009/05/colgan_air_officials_testify_t.html.

²³ See John Croft, *NASA, EasyJet to Study Commuting, Fatigue*, FLIGHT INT’L (May 13, 2010), <http://www.flightglobal.com/articles/2010/05/13/341934/nasa-easy-jet-to-study-commuting-fatigue.html>.

more.²⁴ As of 2006, 70% of AirTran's pilots lived outside of its base in Georgia and commuted into Atlanta to begin and end their shifts.²⁵ Pilots commute to their airline's base city, work for several long days, and then fly home to their permanent residences and families.²⁶ But for most in the industry, commuting is not about being able to live in the most desirable location; it is merely a necessary evil. Why do flightcrews commute? Often, pilots commute because the carrier changed its home base to another city.²⁷ Pilots simply cannot afford to uproot their families every time a carrier changes its base, which can be several times a year.²⁸ Some pilots even commute in from their permanent homes in states like Texas or Florida to avoid paying income tax.²⁹ One flightcrew member reports:

In the past 3 years, the airline I work for has based me in New York, Phoenix, Washington DC, Denver and now back again in Phoenix. I couldn't possibly move my family all over the country just to live where I am based . . . [I]t is definitely more a necessity [sic] than anything else. It's not always about beaches, golfing or mountains.³⁰

Airlines regularly have five to ten cities where they establish "bases"—the location where a flight and crew begins and ends.³¹ Each month, the base and the crew assigned to that base can change, leaving many pilots to travel thousands of miles to begin their shifts.³² Pilots often resort to "crash pads," splitting rent with dozens of strangers for cheap apartments near the airports where they are based, coming and going so often they "barely let[] the mattresses cool."³³ Frank Graham, a former regional pilot, reports, "I know a guy who bought a car that barely ran and parked it in the employee lot at his base airport, and slept in his car six or seven times a month."³⁴ Los Angeles World Air-

²⁴ *Id.*

²⁵ *Fortney v. Airtran Airways, Inc.*, 319 S.W.3d 325, 327 (Ky. 2010).

²⁶ *McCartney*, *supra* note 1.

²⁷ *Id.*

²⁸ *See id.*

²⁹ *Id.*

³⁰ Justin Bachman, *Will New FAA Pilot Rest Rules Affect Commuting?*, BLOOMBERG BUSINESSWEEK (Dec. 10, 2009), http://www.businessweek.com/lifestyle/travelers_check/archives/2009/12/will_new_faa_pilot_rest_rules_affect_commuting.html.

³¹ *McCartney*, *supra* note 1.

³² *Id.*

³³ Halbfinger, *supra* note 2.

³⁴ *Id.*

ports, the city agency that runs LAX airport, recently took a dramatic step to help alleviate the fatigue of commuting by allowing a mobile city in its employee parking lot.³⁵ Flightcrews can park campers or mobile homes on the lot for \$120 per month, albeit without electricity or water hook-ups.³⁶ The lot is at maximum capacity and there are many on the waitlist hoping for a spot.³⁷

Commuting is even more prevalent with commuter pilots, who are often paid far less than pilots on major commercial airlines.³⁸ They often commute from lower-cost cities simply because they cannot afford to live in the cities in which they are based.³⁹ Many cannot even afford a crash pad.⁴⁰ Such was the case for Rebecca Shaw, first officer of Continental Connection Flight 3407, operated by Colgan Air, which crashed February 12, 2009.⁴¹ She earned an annual salary of only \$16,200.⁴² She could not afford to live in New Jersey, the location of her base, so she lived with her parents in Seattle and commuted cross-country for work.⁴³

The February 12, 2009 Colgan Air crash brought media attention back to the issue of commuting and pilot fatigue.⁴⁴ The plane that crashed, killing all forty-nine people onboard, was piloted by Captain Marvin D. Renslow and first officer Rebecca Shaw.⁴⁵ The NTSB found that fatigue was a contributing factor to the crash, noting that both the captain and the first officer had flown transnational commutes prior to their scheduled flight that evening.⁴⁶ Shaw was living with her parents in Seattle and pulled an all-nighter before her scheduled flight, flying first

³⁵ McCartney, *supra* note 1.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *See id.*

³⁹ *See id.*; Halbfinger, *supra* note 2.

⁴⁰ Halbfinger, *supra* note 2.

⁴¹ Sholnn Freeman, *Panel on Fatal Crash Looks at Pilots' Pay, Commutes*, WASH. POST (May 14, 2009), <http://bx.businessweek.com/airline-industry/view?url=http%3A%2F%2Fwww.washingtonpost.com%2Fwp-dyn%2Fcontent%2Farticle%2F2009%2F05%2F13%2FAR2009051301848.html%3Fhp%3Dmoreheadlines>.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *See, e.g.*, Lisa Stark, *Buffalo Crash: 'A Recipe for an Accident'*, ABCNEWS.COM (May 13, 2009), <http://abcnews.go.com/Travel/story?id=7577389&page=1>; Wald, *supra* note 14; Dan Weikel, *Are Pilots Flying Beyond Their Limits?*, L.A. TIMES (Jan. 17, 2010), <http://articles.latimes.com/print/2010/jan/17/business/la-fi-cover17-2010jan17>.

⁴⁵ Wald, *supra* note 14.

⁴⁶ *Id.*

from Seattle to Memphis, and then to Newark, Colgan's base.⁴⁷ Reports said she was planning to nap in the crew lounge in Newark, even though it was against airline policy.⁴⁸ Captain Renslow flew from his Florida home to Newark the previous evening, and he was awake throughout the night and the next morning, logging into the computer system at 3:00 a.m. and 7:30 a.m. on the day of the accident.⁴⁹ Both were heard yawning in the cockpit prior to the stall.⁵⁰ The crash brought the issue of pilot fatigue and commuting into the spotlight and prompted the NTSB to pressure the FAA and Congress to revise pilot rest requirements, resulting in the Airline Safety and Federal Aviation Administration Extension Act of 2010 (Airline Safety Act).⁵¹

C. FAA REGULATION: PAST AND PRESENT

The FAA has been regulating pilot duty and flight time since the 1940s.⁵² In 1985, the FAA was finally able "to establish flight time limitations and rest requirements for domestic air carrier and regional pilots," updating rules that had been largely unchanged since the 1930s.⁵³ In 1989, the NTSB recommended researching fatigue, education, and revisions to existing legislation.⁵⁴ These recommendations were added to the NTSB's Most Wanted List of Transportation Safety Improvements in 1990, and they remain today.⁵⁵ In 1995, the FAA proposed legislation

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ Nat'l Transp. Safety Bd., Office of Aviation Safety, Crash During Approach: Colgan Air, Inc. Flight 3407 Bombardier Dash 8-Q400, at 21 (Feb. 12, 2009), http://www.nts.gov/Events/2009/Bufalo-NY/IIC_presentation_Colgan_Public_Hearing.pdf.

⁵⁰ Wald, *supra* note 14.

⁵¹ See Airline Safety and Federal Aviation Administration Extension Act of 2010, Pub. L. No. 111-216 § 212 (codified as amended at 49 U.S.C. § 44701 (2000)) [hereinafter Airline Safety Act]; Clement Tan, *Deadly Plane Crash Near Buffalo Underscores Safety Gap, Official Says*, L.A. TIMES (Feb. 3, 2010), <http://articles.latimes.com/2010/feb/03/nation/la-na-ntsb3-2010feb03>.

⁵² *Flightcrew Member Duty and Rest Requirements: Hearing on Pilot Flight and Duty Time Rule Before the Subcomm. on Aviation of the Comm. on Transp. and Infrastructure H. of Rep.*, 111th Cong. 69 (2010) (statement of Jerry F. Costello, Chairman, Subcomm. on Aviation) [hereinafter Costello Statement].

⁵³ Temesha Evans-Davis, Comment, *Pilot Fatigue: Unresponsive Federal Aviation Regulations and Increasing Cockpit Technology Threaten to Rock the Nation's Pilots to Sleep and Compromise Consumer Safety*, 65 J. AIR L. & COMM. 567, 577 (2000).

⁵⁴ Costello Statement, *supra* note 52, at 69.

⁵⁵ See *Most Wanted Transportation Safety Improvements*, NAT'L TRANSP. SAFETY BD. (Jan. 2011), http://www.nts.gov/recs/mostwanted/aviation_reduce_acc_inc_humanfatig.htm.

to address pilot fatigue, but the industry could not reach a consensus, stating that the FAA lacked safety data to justify the rulemaking and that industry compliance would impose significant costs.⁵⁶ The 1995 Notice of Proposed Rule Making (NPRM) eventually stalled after the ValueJet crash in 1996 and the resulting upheaval within FAA leadership.⁵⁷ The FAA eventually withdrew the 1995 NPRM in 2009.⁵⁸ Then, after the Colgan Air crash put the issue of pilot fatigue back into the spotlight, the NTSB again pressed the FAA and Congress to revise rest requirements, resulting in the Airline Safety Act.⁵⁹

The Airline Safety Act required the FAA to issue regulations no later than August 1, 2011, "to specify limitations on the hours of flight and duty time allowed for pilots to address problems relating to pilot fatigue," taking into account scientific research on sleep and fatigue.⁶⁰ It further directed the FAA to require air carriers to create fatigue risk-management systems to alleviate pilot fatigue within ninety days.⁶¹ On September 14, 2010, the FAA published a NPRM entitled "Flightcrew Member Duty and Rest Requirements."⁶² The Airline Safety Act requires the FAA to develop new rules addressing pilot fatigue and rest requirements, assuring that this NPRM will not suffer the same fate as the FAA's previously proposed predecessor that did not have the force of the Airline Safety Act behind it.⁶³

In June 2009, the FAA began the process of developing new rest requirements by creating the Flight and Duty Time Limitations and Rest Requirements Aviation Rulemaking Committee (ARC), consisting of eighteen members representing airline and union associations.⁶⁴ The ARC's task was to develop recommendations for an FAA rule based on current fatigue research.⁶⁵ The FAA reiterated that it was interested in the ARC's proposal

⁵⁶ Costello Statement, *supra* note 52, at 69; NPRM, *supra* note 6, at 55,853.

⁵⁷ Teresa Mattick, *Reserve Rest Requirements*, AIR LINE PILOT, 17 (Aug. 1999), available at <http://cf.alpa.org/internet/projects/ftdt/alpmag/augrest.html>.

⁵⁸ NPRM, *supra* note 6, at 55,853.

⁵⁹ Tan, *supra* note 51; see Airline Safety Act, *supra* note 51.

⁶⁰ Airline Safety Act, *supra* note 51, §§ 212(a)(1), (a)(3).

⁶¹ *Id.* § 212 (b)(1).

⁶² NPRM, *supra* note 6, at 55,852.

⁶³ See *Flightcrew Member Duty and Rest Requirements: Hearing on Pilot Flight and Duty Time Rule Before the Subcomm. on Aviation of the Comm. on Transp. and Infrastructure H. of Rep.*, 111th Cong. 78 (2010) (statement of Hon. James L. Oberstar).

⁶⁴ NPRM, *supra* note 6, at 55,853.

⁶⁵ *Id.*

but, in the end, the agency would independently determine the new legislation.⁶⁶

II. OVERVIEW OF THE PROPOSED LEGISLATION

The proposal ultimately developed by the FAA makes sweeping changes to pilot flight time, duty time, and rest requirements.⁶⁷ Additionally, the proposal eliminates the distinction between the types of operations.⁶⁸ Under the NPRM, domestic, international, and supplemental (cargo) operations all will operate under the same regulation.⁶⁹ This Comment will address the major changes to passenger and cargo carriers including: (1) flight time and duty period changes; (2) the elimination of cargo differentiation; (3) changes to minimum rest requirements; and (4) changes to augmented flights. This Comment will not discuss the exceptions and regulations for military carriers.

A. FLIGHT TIME AND DUTY PERIOD CHANGES

1. *Flight Duty Period*

The most dramatic change under the new regulation is how it computes flight time and duty hours.⁷⁰ Using fatigue-based performance modeling, the ARC came to several conclusions on which the flight duty period (FDP)⁷¹ changes are based: (1) performance degrades during windows of circadian low (WOCL);⁷² (2) flying several legs with multiple takeoffs and landings during a duty period cause more fatigue than a long, continuous flight;

⁶⁶ *Id.*

⁶⁷ See Press Release, Federal Aviation Admin., Fact Sheet—Pilot Fatigue (Sept. 10, 2010) [hereinafter FAA Press Release], *available at* http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=11857.

⁶⁸ NPRM, *supra* note 6, at 55,854.

⁶⁹ *Id.*

⁷⁰ See FAA Press Release, *supra* note 67.

⁷¹ Flight duty period is the total work shift of the pilot. See NPRM, *supra* note 6, at 55,859. Under the new definition, “[a]n FDP begins when a crewmember is required to report for duty that includes a flight, series of flights, or positioning flights . . . and ends when the aircraft is parked after the last flight and there is no plan for further aircraft movement by the same crewmember.” *Id.* FDP includes deadheading but not commuting. See *id.* at 55,871–76.

⁷² WOCL is a period of “maximum sleepiness,” where “performance capabilities are lowest.” “One occurs at night, roughly from 3 a.m. to 5 a.m., . . . [t]he other is in the afternoon, roughly from 3 p.m. to 5 p.m.” BASICS OF AVIATION FATIGUE AC, *supra* note 18, at 2.

and (3) nighttime flying introduces additional fatigue.⁷³ Based on these findings, the FAA ultimately proposed a FDP schedule determined by the time of day and number of flying segments, regardless of the type of operation.⁷⁴ The proposed FDP schedule is significantly different from current regulations, which set FDP at sixteen hours, regardless of time of shift or number of operations.⁷⁵ While the ARC agreed on the overall FDP structure proposed under the NPRM, it was not able to come to a consensus with regard to the specific hours in any segment, generally representing the labor position and the position of carriers who support a more aggressive FDP.⁷⁶ Ultimately, the FAA sided with the labor position and proposed the more conservative Table A, shown below.⁷⁷ "Flightcrew members would enter the table based on the time at their home base" (the city they normally fly from) unless they have become acclimated to a new time zone, where they would enter the table based on the local time and reduce the FDP by thirty minutes.⁷⁸ The continental United States will be considered one theater, so pilots will always be considered acclimated when flying domestically.⁷⁹

The proposed schedule, shown below in Table A, limits the maximum daily FDP to thirteen hours, which could be further reduced to nine hours if flying at night, recognizing a pilot's reduced capacity during WOCL.⁸⁰ Extensions to the flightcrew FDP would be made jointly by the carrier and pilot, with no extension allowed beyond two hours.⁸¹ Ninety-five percent of a carrier's schedules would need to fall within this limit, and the carrier will be required to submit its scheduled and actual FDPs on a periodic basis.⁸²

⁷³ See NPRM, *supra* note 6, at 55,858.

⁷⁴ *Id.* at 55,858-59.

⁷⁵ *Id.* at 55,852, tbl.

⁷⁶ *Id.* at 55,859; see *infra* Table A.

⁷⁷ *Id.* at 55,860.

⁷⁸ *Id.* at 55,859.

⁷⁹ *Id.* at 55,861.

⁸⁰ See *infra* Table A.

⁸¹ NPRM, *supra* note 6, at 55,859.

⁸² *Id.* at 55,860.

Table A: Flight Duty Period: Non-Augmented Operations⁸³

Time of Start (Home Base or Acclimated)	Maximum FDP Hours Based on Number of Flight Segments						
	1	2	3	4	5	6	7+
0000–0359	9	9	9	9	9	9	9
0400–0459	10	10	9	9	9	9	9
0500–0559	11	11	11	11	10	9.5	9
0600–0659	12	12	12	12	11.5	11	10.5
0700–1259	13	13	13	13	12.5	12	11
1300–1659	12	12	12	12	11.5	11	10.5
1700–2159	11	11	10	10	9.5	9	9
2200–2259	10.5	10.5	9.5	9.5	9	9	9
2300–2359	9.5	9.5	9	9	9	9	9

This proposed FDP schedule dramatically changes the regulatory landscape for carriers and pilots. First, all passenger, cargo, domestic, international, and supplemental operations will be required to follow the same FDP schedule, a major change from the scheduling based on type-of-operations that exists today.⁸⁴ Second, the NPRM reduces the maximum daily FDP from a flat sixteen hours to a variable schedule of nine to thirteen hours.⁸⁵ Third, the proposal includes a circadian component, sliding night duty periods to nine hours, recognizing that a pilot is less alert during his WOCL.⁸⁶ This variable FTP schedule follows the scheduling of other countries that also recognize a circadian component.⁸⁷

The FAA proposal also limits cumulative duty periods to mitigate the amount of cumulative fatigue that develops during a flightcrew member's workweek. Under the NPRM, duty time is limited to sixty-five hours in any consecutive 168-hour (seven-day) period and 200 hours in any 672-hour (twenty-eight-day) period.⁸⁸ The limits on cumulative rest come from the recognition that prolonged periods of duty over extended periods of time can result in additional fatigue and sleep debt.⁸⁹ Under

⁸³ *Id.* at 55,858–89, tbl.B.

⁸⁴ FAA Press Release, *supra* note 67.

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ See NPRM, *supra* note 6, at 55,859. The international standards that the FAA used to develop the NPRM are discussed more fully in Part III.

⁸⁸ NPRM, *supra* note 6, § 117.23(c), at 55,887.

⁸⁹ *Id.* at 55,871.

the NPRM, flightcrew members' FDP periods begin after they report for duty after her extended rest period.⁹⁰ This too represents a change from current requirements that allow a carrier to define when the day begins in computing a pilot's cumulative FDP.⁹¹

2. *Flight Time*

In addition to regulating a pilot's workweek via FDP limits, the FAA has also retained the flight time limitations—time spent at the controls—from the existing regulatory scheme, although it is unclear at this point if the restriction will remain in the final rule.⁹² The flight time limitations will be superimposed on the FDP limitations, so that regardless of FDP, a pilot may spend no more than the maximum flight time allowed at the controls.⁹³ Remarkably, compared to current regulations, the proposal actually increases the amount of time a pilot could spend at the controls by as much as 25%.⁹⁴

Currently, a pilot can accumulate no more than eight hours flight time per twenty-four-hour period.⁹⁵ Under the proposal, flight time would increase to up to ten hours, depending on FDP start time.⁹⁶ As with the FDP proposal, the flight time limit recognizes a crewmember's WOCL, allowing maximum flight hours during the period a pilot is considered most alert.⁹⁷ Again, the ARC was unable to come to a consensus on specific flight time limitations and proposed two schedules to the FAA.⁹⁸ The FAA ultimately adopted and included in the NPRM the more conservative schedule generally supported by the labor position, shown below in Table B.⁹⁹ This change will have the most

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.* at 55,862–63. The FAA asked for comments on its decision to retain flight time limits. *Id.* at 55,863. Several carriers and carrier groups responded negatively to the FAA's decision to retain flight time limits. See discussion *infra* Part IV.

⁹³ NPRM, *supra* note 6, at 55,862–63.

⁹⁴ COAL. OF AIRLINE PILOTS ASS'NS, TALKING POINTS: "FAA'S NPRM FOR FLIGHT TIME/DUTY TIME (FT/DT)" 5 (2010) [hereinafter CAPA RECOMMENDATIONS], available at http://www.capapilots.org/Websites/capa/Images/Documents/Legislative/CAPA_NPRM-FTDT%20Talking%20Points_Oct2010.pdf.

⁹⁵ NPRM, *supra* note 6, at 55,852.

⁹⁶ *Id.*

⁹⁷ *Id.* at 55,863.

⁹⁸ *Id.* at 55,862–63.

⁹⁹ *Id.* at 55,863.

significant impact on flights consisting of a single leg, as with multiple segments, more FDP time will be spent on layovers.¹⁰⁰

Table B: Maximum Flight Time Limits for Un-Augmented Operations¹⁰¹

Time of Start (Home Base)	Maximum Flight Time (Hours)
0000–0459	8
0500–0659	9
0700–1259	10
1300–1959	9
2000–2359	8

Additionally, the new proposal will make a minor change to the monthly maximum flight time; it will go from the current limit of one hundred hours every thirty days to one hundred hours every twenty-eight days.¹⁰² The yearly limit will remain at one-thousand hours, but the proposal changes the timeframe from a calendar year to 365 days.¹⁰³ This balancing approach allows pilots to work long hours over a short period of time, but reduces the number of hours they will fly over an extended period of time, allowing for more recovery sleep. However, the proposed changes to weekly, monthly, and annual flight time limits will have a much more dramatic effect on cargo pilots, who are allowed to fly 20–40% more hours than their passenger-carrying counterparts, as discussed in the next section.¹⁰⁴

B. ELIMINATION OF CARGO CUTOUT

Under current regulations, supplemental (cargo) carriers operate under different flight-time limitations than passenger or international carriers.¹⁰⁵ Supplemental carriers can fly up to forty-eight hours per week, 60% more than passenger carriers.¹⁰⁶ Additionally, their monthly flight time limit is 20% higher at 120 hours per month, and their annual flight time limit is 40% higher than passenger carriers, allowing cargo pi-

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 55,888, tbl.A.

¹⁰² FAA Press Release, *supra* note 67.

¹⁰³ *Id.*

¹⁰⁴ See discussion *infra* Part II.B.

¹⁰⁵ Cargo Operations, *supra* note 15, at 6-8.

¹⁰⁶ *Id.* at 8.

lots to fly up to 1,400 hours annually.¹⁰⁷ Cargo pilots also frequently fly at night without advanced schedules, reducing their ability to get scheduled sleep that occurs within their WOCL, which adds to their overall fatigue.¹⁰⁸ The FAA pushed for a single level of safety across the board, recognizing that cargo pilots share the same equipment, routes, and airspace as passenger carriers but operate with significantly less rest.¹⁰⁹ The FAA reflected this recognition in the NPRM, which now treats cargo operations the same as passenger or international operations.¹¹⁰

Cargo carriers, however, do not support the new proposal.¹¹¹ They contend that the FAA's cost/benefit analysis is flawed because it fails to consider the reduced benefit to cargo carriers given the reduced preventable causalities compared to passenger carriers.¹¹² Thus, despite requests from the Cargo Airline Association and National Air Carrier Association asking the FAA to consider the unique operations of cargo carriers, the FAA eliminated the distinction for cargo carriers in the proposal.¹¹³ Under the NPRM, passenger, supplemental, and flag operations will now all operate with the same flight time limitations, duty period limitations, and rest requirements.¹¹⁴ The ramifications of combining cargo operation requirements with passenger operation requirements is discussed in Part IV.

C. REST REQUIREMENTS

The changes to the minimum daily rest requirements, while seemingly minor, are the most contentious and hotly contested revision under the new proposal. The NPRM section 117.25(d) states:

No certificate holder may schedule and no flightcrew member may accept an assignment for reserve or a flight duty period unless the flightcrew member is given a rest period of at least 9 consecutive hours before beginning the reserve or flight duty pe-

¹⁰⁷ See *id.* at 9.

¹⁰⁸ See *id.* at 41.

¹⁰⁹ *Id.* at 10.

¹¹⁰ NPRM, *supra* note 6, at 55,854.

¹¹¹ See, e.g., COMMENT OF UNITED PARCEL SERV. CO. IN THE MATTER OF FLIGHTCREW MEMBER DUTY AND REST REQUIREMENTS NOTICE OF PROPOSED RULEMAKING: FAA NOTICE 1 (Nov. 15, 2010) [hereinafter UPS COMMENT], available at <http://www.regulations.gov/#!documentDetail;D=FAA-2009-1093-2369> (click on image displaying "PDF").

¹¹² See *id.* at 18.

¹¹³ NPRM, *supra* note 6, at 55,853–54.

¹¹⁴ *Id.* at 55,854.

riod measured from the time the flightcrew member reaches the hotel or other suitable accommodation.¹¹⁵

While the incremental increase in rest time from eight hours under the current regulation to the nine hours proposed is only a 12.5% increase, the battle is waging between the FAA and carriers on when the clock starts.¹¹⁶ The critical distinction between the current regulation and the NPRM is that under existing regulations, the rest-time clock begins when the pilot's duty period ends.¹¹⁷ This means that commuting time—local or by air—is counted against the pilot's rest period. The eight hour rest period under current regulations includes time spent in customs, travel from the airport, hotel check-in, shower, sleep, meals, and hopefully, rest.¹¹⁸ "At the very most, if you're the kind of person that could walk into a hotel room, strip and lay down, you might get four and a half hours of sleep," according to retired Captain Paul Nietz.¹¹⁹ The FAA recognized that an eight hour rest time does not equate to an eight hour actual sleep opportunity, and sought to address this concern by providing a buffer period to allow pilots to travel to a rest facility and still get the requisite amount of sleep.¹²⁰

The ARC proposal, although not unanimous, proposed at minimum a ten hour rest time, allowing a one hour buffer zone on either side of the eight hour sleep opportunity.¹²¹ Notably, the ARC proposal included and allowed for travel time to be counted within the rest period but did not address the practice of interstate commuting prevalent in the industry.¹²² This proposal would have made the rest requirement very similar to existing legislation, with the only distinction being the number of hours of rest (to allow for local commuting) and the variation based on start time. The FAA, however, rejected the ARC proposal and took a dramatically different approach.¹²³ Under the NPRM, the rest "clock" begins when a pilot reaches his sleep

¹¹⁵ *Id.* § 117.25(d), at 55,888 (emphasis added).

¹¹⁶ See discussion *infra* Part IV.

¹¹⁷ CAPA RECOMMENDATIONS, *supra* note 94, at 5.

¹¹⁸ See *id.*

¹¹⁹ Halbfinger, *supra* note 2.

¹²⁰ NPRM, *supra* note 6, at 55,873.

¹²¹ *Id.*

¹²² See *id.*; *Flightcrew Member Duty and Rest Requirements: Hearing on Pilot Flight and Duty Time Rule Before the Subcomm. on Aviation of the Comm. on Transp. and Infrastructure H. of Rep.*, 111th Cong. 5–7 (2010) (statement of Margaret Gilligan, Assoc. Adm'r for Aviation Safety, FAA).

¹²³ NPRM, *supra* note 6, at 55,873.

facility.¹²⁴ The proposal considers travel time, presumably even national commuting time, neither duty nor rest.¹²⁵ In the proposal, the FAA attempts to downplay the magnitude of the effect of the change in language, stating simply that “the FAA believes that time in transit is not rest,” and, thus, thirty minutes needed to be added to the minimum rest requirements on either side to account for travel time.¹²⁶ However, the FAA entirely failed to address in its proposal or in subsequent communications how carriers would begin to track this time or why carriers were saddled with such an open-ended responsibility.¹²⁷ The significant issues raised and possible effects to the industry by this unaccounted-for travel time are discussed in Part IV.

The FAA has tentatively applied the same rest requirements to international and domestic operations, rejecting the ARC proposal that would allow longer rest periods internationally to account for the effect a time zone change has on a pilot’s ability to get rest.¹²⁸ Thus, the proposal will often decrease the amount of rest a pilot would receive after an international flight.¹²⁹ Under current FAR Part 121, the rest period for international operations is twice the amount of hours actually flown with a minimum requirement of eight hours rest.¹³⁰ For example, a pilot who is at the controls for seven hours from New York City to Madrid must be given a minimum of fourteen hours rest, including travel time, before he can be called for duty.¹³¹ However, under the NPRM, he will only receive nine hours of rest, calculated from the time he reaches the hotel, regardless of his terminating location or length of previous duty.¹³² The effect of this redefinition of rest will be most pronounced on cargo operators, who currently have no regulatory preflight rest requirement.¹³³ Cargo carriers will now be required to give pilots the

¹²⁴ *Id.* § 117.25(d), at 55,888.

¹²⁵ *See id.* at 55,867.

¹²⁶ *Id.* at 55,873.

¹²⁷ *See id.*; FED. AVIATION ADMIN., RESPONSE TO CLARIFYING QUESTIONS: 14 CFR PARTS 117 AND 121 FLIGHT CREW MEMBER DUTY AND REST REQUIREMENTS; PROPOSED RULE 20 (Oct. 22, 2010) [hereinafter FAA RESPONSE TO CLARIFYING QUESTIONS], available at <http://www.regulations.gov/#!documentDetail;D=FAA-2009-1093-0365> (click on image displaying “DOC”).

¹²⁸ NPRM, *supra* note 6, at 55,873.

¹²⁹ Compare 14 C.F.R. § 121.481(b) (2010), with NPRM, *supra* note 6, at 55,873.

¹³⁰ 14 C.F.R. § 121.481(b) (2010).

¹³¹ *See id.*

¹³² *See* NPRM, *supra* note 6, at 55,873.

¹³³ Cargo Operations, *supra* note 15, at 13.

same opportunity for rest—nine hours at the hotel—as passenger carriers.¹³⁴

Additionally, the NPRM also increases the weekly required rest period, providing some balance to the increase in maximum flight hours a pilot can work in a single day.¹³⁵ Currently, pilots are required to have twenty-four hours rest free from all duty on a weekly basis.¹³⁶ The NPRM provides pilots with at least thirty consecutive hours free from duty per week, a 25% increase.¹³⁷

D. COMMUTING AND FITNESS FOR DUTY

Under current regulation, the only limitation on irresponsible commuting is the requirement under FAR Part 91 that a pilot report “fit for duty.”¹³⁸ This requirement is solely the responsibility of the pilot.¹³⁹ While the ARC proposed to leave this requirement in place, the FAA ultimately imposed additional responsibilities on carriers, stating it was “inappropriate to simply rely on the existing requirements in part 91 to report to work fit for duty.”¹⁴⁰ Under the new proposal and subsequent advisory circulars, fatigue management will now be the joint responsibility of carriers and pilots.¹⁴¹ A pilot will still be responsible for being physically fit—including being well-rested—prior to duty.¹⁴² However, the NPRM and Advisory Circular make clear that the carrier will also have an obligation to make sure the flightcrew is well-rested before any assignment.¹⁴³ The NPRM states, “[n]o certificate holder may assign . . . a flight duty period . . . [to a] flightcrew member . . . if the certificate holder believes that the flightcrew member is too fatigued to safely perform his or her assigned duties.”¹⁴⁴ However, the Advisory Circular seems to take this carrier requirement one step further: “Air carriers must assess the crewmember’s state when they report to work. If the air carrier determines a crewmember is too

¹³⁴ NPRM, *supra* note 6, §117.25(d), at 55,888.

¹³⁵ See FAA Press Release, *supra* note 67.

¹³⁶ *Id.*

¹³⁷ NPRM, *supra* note 6, at 55,854.

¹³⁸ *Id.* at 55,874.

¹³⁹ See *id.* at 55,874–75.

¹⁴⁰ *Id.*

¹⁴¹ *Id.* at 55,857.

¹⁴² *Id.* at 55,875.

¹⁴³ *Id.*; see also FITNESS FOR DUTY DRAFT AC, *supra* note 7, at 3.

¹⁴⁴ NPRM, *supra* note 6, § 117.5(b), at 55,885.

tired, it may not allow the crewmember to fly.”¹⁴⁵ It is thus unclear how much responsibility a carrier will have to determine its flightcrew members’ fitness to fly. The FAA has also yet to articulate the consequences if a certificate holder fails to comply.¹⁴⁶ Fitness for duty responsibility and the concerns posed by the NPRM and Advisory Circular are later discussed in Part IV.

E. AUGMENTATION

An augmented flightcrew is a crew that has more than the minimum number of pilots required to pilot the aircraft so that pilots can alternate shifts to get in-flight rest.¹⁴⁷ Augmentation was originally designed for long-distance commutes where a substitution of crew was not possible.¹⁴⁸ Currently, augmentation allows a carrier to increase a pilot’s flight time to twelve to sixteen hours, depending on the size of the crew.¹⁴⁹ Currently, augmentation is only permitted on international and cargo flights, not domestic passenger carriers.¹⁵⁰ However, under the NPRM, the FAA will now allow domestic augmentation for passenger carriers if a sufficient rest period and facility are provided.¹⁵¹ If a carrier meets these limitations the carrier can augment any flight, including any domestic passenger flight under three segments.¹⁵² This allows a carrier to increase a pilot’s FDP up to twelve to eighteen hours, depending on the nature of the rest facility, the number of pilots, and the start time.¹⁵³ By allowing domestic augmentation of passenger carriers, the FAA increased the number of pilots who will be flying longer split-shift hours, a seemingly counterintuitive safety measure.

Under the NPRM, each crewmember will have to be rated as a pilot-in-command (PIC) or second-in-command (SIC), and at

¹⁴⁵ FITNESS FOR DUTY DRAFT AC, *supra* note 7, at 3.

¹⁴⁶ See NPRM, *supra* note 6, at 55,875; FITNESS FOR DUTY DRAFT AC, *supra* note 7, at 2-3.

¹⁴⁷ NPRM, *supra* note 6, § 117.3, at 55,884-85.

¹⁴⁸ Letter from Capt. Chesley B. “Sully” Sullenberger III to J. Randolph Babbitt, Adm’r, Fed. Aviation Admin. (Sept. 15, 2010) [hereinafter Sully Letter], available at http://www.capapilots.org/Websites/capa/Blog/1223883/CAPA_FTDT%20Press%20Release_Sept%202010.pdf.

¹⁴⁹ NPRM, *supra* note 6, at 55,863-64.

¹⁵⁰ *Id.* at 55,863 & n.27.

¹⁵¹ *Id.* at 55,864.

¹⁵² See *id.* at 55,865-66.

¹⁵³ *Id.* at 55,889, tbl.C.

all times a PIC must be at the controls.¹⁵⁴ No longer will flight engineers serve as relievers unless they are rated as a PIC or SIC.¹⁵⁵ Additionally, the onboard rest facilities will now be classified into four categories, with different sleep credits applied to each type of rest facility.¹⁵⁶ Rest facilities are rated according to factors such as sleep position, noise, and isolation from passengers.¹⁵⁷ Interestingly, the proposal gives zero credit to rest in a coach seat, recognizing that pilots are unlikely to get rest in a passenger area where seats do not adequately recline.¹⁵⁸ With an augmented crew, the maximum flight time allowed increases to sixteen hours, 60% higher than the ten-hour maximum under non-augmented schedules.¹⁵⁹ However, there are some limits to the use of augmented flights domestically. First, the schedule must include no more than three segments, to discourage extending the FDP for multiple-segment flights.¹⁶⁰ Second, two hours of in-flight rest must be provided for the pilot responsible for take-off and landings, and ninety minutes of rest must be provided for all other crewmembers.¹⁶¹ The ramifications and predictions from a proposal allowing domestic augmentation are discussed in Part IV.

III. COMPARING THE NPRM TO INTERNATIONAL STANDARDS

In drafting the NPRM, the FAA primarily looked at the standards on pilot rest and duty time promulgated by the United Kingdom and the European Union (EU) as well as the standards set forth by the International Civil Aviation Organization (ICAO).¹⁶² While the FAA recognized that the U.S. aviation industry is unique, it borrowed heavily from these international regulations when designing the NPRM, specifically the circadian-based limitations on FDP.¹⁶³ This section will discuss each of the international regulatory frameworks to which the FAA looked for guidance—the ICAO Standards, the UK’s CAP-

¹⁵⁴ *Id.* at 55,864.

¹⁵⁵ *Id.* at 55,866.

¹⁵⁶ *See id.* at 55,864–65.

¹⁵⁷ *Id.* at 55,864.

¹⁵⁸ *Id.*

¹⁵⁹ *See id.* at 55,863–64.

¹⁶⁰ *Id.* § 117.19(d), at 55,887.

¹⁶¹ *Id.* § 117.19(c), at 55,887.

¹⁶² *See id.* at 55,856.

¹⁶³ *Id.*

371, and the EU's Subpart Q—as well as the new European proposal that was announced late in 2010.

A. INTERNATIONAL CIVIL AVIATION ORGANIZATION STANDARDS
AND RECOMMENDED PRACTICES

The ICAO is a specialized agency of the United Nations that provides and adopts international Standards and Recommended Practices (SARPs) regulating international air transport.¹⁶⁴ Headquartered in Montreal, the ICAO is responsible for adopting SARPs “concerning air navigation, its infrastructure, [f]light inspection, prevention of unlawful interference, and facilitation of border-crossing procedures for international civil aviation” for its 190 member countries, including the United States.¹⁶⁵ The ICAO's SARP “Operation of Aircraft” provides that carriers should establish rest requirements, flight time, and duty period limitations to manage the fatigue of its flightcrew members.¹⁶⁶ The SARP does not publish any numerical values for these provisions, but only outlines a regulatory framework where individual member countries can establish their own numerical values within each category.¹⁶⁷ The ICAO member countries are required to support their regulatory fatigue-management schemes with science-based principles with the goal of ensuring that pilots are able to perform at an adequate level of alertness for safe flight operations.¹⁶⁸ Additionally, members are encouraged to look at the regulatory schemes of other member countries for guidance and consistency.¹⁶⁹ The ICAO provides that if a member country is unable to implement a SARP, it must indicate on any certificate or license that it does not meet the requirements of the SARP.¹⁷⁰ Other member

¹⁶⁴ INTERNATIONAL CIVIL AVIATION ORGANIZATION 2, *available at* <http://www.icao.int/icao/en/pub/memo.pdf>.

¹⁶⁵ *International Civil Aviation Organization (ICAO)*, MALAY. PASSPORT TRAVEL DOCUMENT TO THE WORLD, <http://www.passport.my/ICAO.htm> (last updated June 12, 2010, 10:45 PM).

¹⁶⁶ INT'L CIVIL AVIATION ORG., AMENDMENT NO. 33 TO THE INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES: OPERATION OF AIRCRAFT, ANNEX 6 TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION 8 (Mar. 2009), *available at* <http://www.regulations.gov/#!documentDetail;D=FAA-2009-1093-0012>.

¹⁶⁷ *Id.* at 12.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ LOUISE BUTCHER & VINCENT KETER, AVIATION: PILOTS AND CREW, SN/BT/310, at 2 (Feb. 14, 2010), *available at* <http://www.parliament.uk/briefingpapers/commons/lib/research/briefings/snbt-00310.pdf>.

countries then have the right to choose not to recognize any certificate or license from a country that fails to meet the SARP requirements.¹⁷¹

B. EUROPEAN UNION OPS SUBPART Q

Subpart Q to the Commission of the European Communities Regulation No. 3922/91 prescribes limitations on flight duty periods, flight time, and rest requirements.¹⁷² Enacted in July 2008 by the European Union, the EU-OPS Subpart Q sets minimum legal requirements on flight and duty time limitations and rest requirements for its member countries.¹⁷³ However, each EU member can apply stricter regulations at a national level.¹⁷⁴ Similar to the NPRM, Subpart Q provides for daily FDP limits, as well as weekly FDP limits monthly FDP limits, monthly flight time limits, and annual flight time limits.¹⁷⁵ Notably, Subpart Q does not provide a limit on daily flight time; the only daily restriction is the FDP limit.¹⁷⁶

Under Subpart Q, the minimum rest requirement is either the length of the preceding duty period or twelve hours (ten hours if the duty period begins at a location other than home base), whichever is greater.¹⁷⁷ This rest period is considerably longer than even the nine hours proposed under the NPRM, although travel time is included in the Subpart Q rest period.¹⁷⁸ Under Subpart Q, the maximum daily FDP for a flightcrew member is thirteen hours, with a reduction of up to two hours if the FDP occurs within the pilot's WOCL (0200 and 0559).¹⁷⁹ Although there are no daily flight time limits, Subpart Q does provide monthly and annual flight time limits of 100 hours and 900 hours, respectively.¹⁸⁰ However, the annual flight time limits are

¹⁷¹ *Id.*

¹⁷² NPRM, *supra* note 6, at 55,856.

¹⁷³ Daniel Rae, *EU-OPS 1 replaces JAR-OPS 1 on 16 July 2008*, GAEL COMMUNITY (June 6, 2008, 2:00 PM), http://www.gaelcommunity.com/blogs/quality_news/archive/2008/06/06/eu-ops-1-replaces-jar-ops-1-on-16-july-2008.aspx.

¹⁷⁴ EUROPEAN AVIATION SAFETY AGENCY, NOTICE OF PROPOSED AMENDMENT (NPA) No 2010-14A, at 13 (Dec. 20, 2010) [hereinafter EASA NPA].

¹⁷⁵ Commission Regulation 859/2008, 2008 O.J. (L254) 225 (EU) [hereinafter EU Subpart Q], *available at* http://eur-lex.europa.eu/Result.do?aaaa=2008&mm=9&jj=20&type=l&nnn=254&pppp=1&RechType=RECH_reference_pub&Submit=Search.

¹⁷⁶ *See id.* at 225–26.

¹⁷⁷ *Id.* at 227.

¹⁷⁸ *See id.*

¹⁷⁹ *Id.* at 225–26.

¹⁸⁰ *Id.* at 225.

per calendar year, not per 365-day period as the NPRM allows.¹⁸¹ This subtle change in terminology makes a big impact on the cumulative hours a pilot could fly. For example, a pilot could fly up to 700 hours between June and December (7 months x 100 hours per month) and an additional 600 hours between January and June (6 months x 100 hours per month) and accumulate 1,300 hours in 365 days but be well within the 900-hour limit per calendar year.¹⁸² This loophole will be closed by the NPA, the EU's proposed legislation scheduled to take effect in 2012, discussed below in subsection D.¹⁸³

Subpart Q's flight and duty time restrictions are generally consistent with the NPRM, although the NPRM's restriction on daily flight time generally makes the FAA proposal more conservative. However, the EU's Subpart Q is more protective of rest time.¹⁸⁴ See Table C below to compare the EU's Subpart Q rest and flight time restrictions with the FAA's NPRM.

Table C: Comparing Subpart Q, CAP-371, the EU's NPA and the FAA's NPRM¹⁸⁵

	Daytime FDP limit	Night FDP limit (2200-0459)	Daily Flight Time	Weekly FDP	Monthly FDP	Monthly Flight Time	Annual Flight Time	Rest Required
EU Subpart Q	13	11	none	60	190	100	900	greater of 12 hrs or preceding FDP
U.S. NPRM	9-13	9-10.5	10	65	200	100	1,000	9 at hotel
CAP-371 (single crewmember)	8-11	8	none	55	190	100	900	greater of 12 hrs or preceding FDP
EU NPA	9-13	9-12	none	60	190	100	1,000	greater of 12 hrs or preceding FDP

Notably, Subpart Q sets out only the minimum requirement across the EU and permits each member state to decrease the flight and duty time maximums and increase the rest require-

¹⁸¹ See *id.*

¹⁸² See *id.*

¹⁸³ See discussion *infra* Part III.D.

¹⁸⁴ Compare EU Subpart Q, *supra* note 175, at 225 with NPRM, *supra* note 6, § 117.25(d), at 55,888.

¹⁸⁵ NPRM, *supra* note 6, at 55,887-89; EU Subpart Q, *supra* note 175, at 225-27; CIVIL AVIATION AUTH., CAP 371: THE AVOIDANCE OF FATIGUE IN AIRCREWS § B, at 11, 13-14, § C, at Annex B, p. 10 (4th ed. Jan. 2004) [hereinafter CAP-371]; EASA NPA, *supra* note 174, at 233, 226, 228.

ments.¹⁸⁶ For example, Great Britain, which operates under CAP-371, generally has a more conservative FDP, while in eastern Europe, the limit is much higher.¹⁸⁷ The result has been a “hodgepodge” of national regulations that vary across the continent.¹⁸⁸ These issues are addressed by the EU’s new proposed legislation that would standardize flight time limitations and rest requirements across Europe,¹⁸⁹ discussed below in subsection D.

C. UNITED KINGDOM CIVIL AVIATION AUTHORITY PUBLICATION 371 (CAP-371)

The United Kingdom’s Civil Aviation Authority (CAA) first published regulations on fatigue in aircrews under CAP-371 in 1990.¹⁹⁰ The fourth edition of CAP-371, “The Avoidance of Fatigue in Aircrews” was published in January 2004.¹⁹¹ After the EU published Subpart Q in 2008, the CAA reviewed the legislation and ultimately decided to retain its own, more conservative flight time limitations under CAP-371, since it comported with the minimal requirements under Subpart Q.¹⁹² Like the NPRM, the UK’s CAP-371 regulates FDP through a table, setting maximum limits that are reduced based on time of day and number of flight segments.¹⁹³ CAP-371 is a more conservative FDP schedule than either the NPRM or Subpart Q, limiting FDP to eleven hours for an aircraft operated by a single flight crew or to eight hours if flying at night (2200 to 0559).¹⁹⁴ With a two-person flight crew pair, the maximum FDP is increased to fourteen hours and nine to eleven hours if flying at night.¹⁹⁵ This FDP may be increased through augmentation or split duty rest of more than three hours.¹⁹⁶ Similar to Subpart Q and its successor NPA (discussed below), CAP-371 has no limit on daily flight

¹⁸⁶ Slobodan Lekic, *EU Unveils Proposed Flight Time Limit for Pilots*, ASSOCIATED PRESS (Dec. 12, 2010), <http://www.msnbc.msn.com/id/40749964/ns/travel-news/>.

¹⁸⁷ *Id.*

¹⁸⁸ *EASA Moves on Pilot Fatigue*, AVIATION TODAY (Jan. 3, 2011), http://www.aviationtoday.com/regions/usa/EASA-Moves-on-Pilot-Fatigue_72052.html.

¹⁸⁹ *Id.*

¹⁹⁰ Butcher & Keter, *supra* note 170, at 6.

¹⁹¹ CAP-371, *supra* note 185.

¹⁹² *See Subpart Q Implementation at National Level*, EUROPEAN COCKPIT ASS’N (Aug. 14, 2008), <http://www.eurocockpit.be/stories/20080814/subpart-q-implementation-at-national-level>.

¹⁹³ CAP-371, *supra* note 185, § B, at 10, tbl.C.

¹⁹⁴ *Id.*

¹⁹⁵ *Id.* § C, at Annex B, p. 10, tbl.A.

¹⁹⁶ *Id.* § B, at 11.

time; the only daily restriction is the FDP limit.¹⁹⁷ CAP-371 provides flight-hour limitations only on a monthly or annual period.¹⁹⁸ Table C, above, compares the UK's CAP-371 flight time limitations with the NPRM and Subpart Q.

CAP-371 is also generally more protective of rest than regulation under the NPRM. First, similar to Subpart Q, the minimum rest requirement is at least twelve hours or the length of the preceding duty period, whichever is greater.¹⁹⁹ This is considerably longer than the nine hours provided by the NPRM.²⁰⁰ Additionally, CAP-371 provides that when flightcrew rest periods are scheduled away from base, the carrier must provide suitable accommodations.²⁰¹ Moreover, if the preceding duty period exceeds eighteen hours, then the following rest period must include a local night,²⁰² allowing crewmembers to become acclimated to new time zones. Unlike the NPRM, CAP-371 does include local travel time in the rest period; however, it advises flightcrew members who travel in excess of 1.5 hours to get to their home base to "consider making arrangements for temporary accommodation nearer to base."²⁰³

However, Great Britain will not be able to keep CAP-371 forever. Soon, mandatory legislation will go into effect that will supersede CAP-371 with new rules standardizing flight time limitations and rest requirements across Europe,²⁰⁴ discussed in the next section.

D. REGULATIONS TO UNIFY EUROPEAN STANDARDS IN 2012

In 2003, the EU established the European Aviation Safety Agency (EASA) as an independent EU body under European law.²⁰⁵ The EASA, similar to the FAA, provides expert advice to the EU when drafting new legislation and implements and monitors safety rules for the EU.²⁰⁶ The EASA replaced the disbanded Joint Aviation Authorities (JAA), a voluntary organization representing the civil aviation authorities of a number of

¹⁹⁷ See *id.* § B, at 10.

¹⁹⁸ *Id.* § B, at 14.

¹⁹⁹ *Id.* § B, at 11–12.

²⁰⁰ See NPRM, *supra* note 6, § 117.25(d), at 55,888.

²⁰¹ CAP-371, *supra* note 185, § B, at 11.

²⁰² *Id.* § B, at 12.

²⁰³ *Id.* § B, at 7.

²⁰⁴ EASA Moves on Pilot Fatigue, *supra* note 188.

²⁰⁵ Butcher & Keter, *supra* note 170, at 4.

²⁰⁶ *What We Do*, EUROPEAN AVIATION SAFETY AGENCY, <https://easa.europa.eu/what-we-do.php> (last visited Jan. 30, 2011).

European states.²⁰⁷ Under the JAA, rules and regulations were only recommended, not mandatory, and each member country could still keep their national legislation when preferred.²⁰⁸ Conversely, the EASA regulations will be mandatory for all the EU member states, including the U.K.²⁰⁹

On December 20, 2010, the EASA published a Notice of Proposed Amendment (NPA) to its flight time and duty restrictions in Subpart Q.²¹⁰ The new rules, which go into effect in 2012, limit the flight hours for aircrews and seek to standardize regulations across the EU.²¹¹ The proposal also addresses split duty, augmented crews, and standby limitations not addressed in Subpart Q.²¹² The NPA closes loopholes in Subpart Q by providing additional limits on monthly and annual flight times.²¹³ For example, the monthly limit on duty hours now includes the provision “spread as evenly as practicable throughout this period,” closing a loophole that allowed up to 120 hours of the 140 monthly limit to be accumulated in fourteen days.²¹⁴ Additionally, the NPA adds a new restriction to annual flight time, limiting flight hours to 1,000 hours “in any 12 consecutive calendar months,” closing a loophole that allowed pilots to accumulate up to 1,300 hours in a calendar year.²¹⁵ Unlike Subpart Q, which only set minimum standards and allowed member countries to increase those standards, the EASA’s new proposal sets the standard for all member countries of the EU.²¹⁶

Under the NPA, flight time limitations will be determined by a schedule similar to the NPRM or CAP-371.²¹⁷ The NPA replaces Subpart Q’s flat maximum thirteen-hour FDP with a variable maximum depending on the time of start and the number of segments.²¹⁸ Table D, below, shows the proposed maximum daily FDP under the NPA. The EU’s NPA is similar to the NPRM in that the FDP maximum limit of thirteen hours is ad-

²⁰⁷ Butcher & Keter, *supra* note 170, at 4.

²⁰⁸ *Background*, JOINT AVIATION AUTHS. TRAINING ORG., <https://jaato.com/page/101/> (last visited Jan. 30, 2011).

²⁰⁹ See EASA NPA, *supra* note 174, at 13.

²¹⁰ See generally *id.*

²¹¹ EASA Moves on Pilot Fatigue, *supra* note 188.

²¹² EASA NPA, *supra* note 174, at 5.

²¹³ See *id.* at 226.

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ *Id.* at 13.

²¹⁷ See *id.* at 223.

²¹⁸ *Id.*

justed downward for multiple flight segments and time of day to a minimum of nine hours.²¹⁹ However, the EU's NPA allows a longer FDP during critical hours of a pilot's WOCL.²²⁰ For example, the FDP limits on night duty (between 2200 and 0459) allow pilots to work up to twelve hours, whereas the NPRM only allows a maximum of ten hours.²²¹ Table D, below, illustrates where the EU's proposal FDP limits exceed the maximum duty period under the NPRM, highlighted in bold.

Table D: Maximum Daily FDP Under the EU's NPA²²²

Start Time	1-2 Segments	3 Segments	4 Segments	5 Segments	6+ Segments
0600-1259	13:00	12:30	12:00	11:30	11:00
1300-1329	12:55	12:30	12:00	11:30	11:00
1330-1359	12:40	12:25	12:00	11:30	11:00
1400-1429	12:25	12:10	11:55	11:30	11:00
1430-1459	12:10	11:55	11:40	11:25	11:00
1500-1529	11:55	11:40	11:25	11:10	10:55
1530-1559	11:40	11:25	11:10	10:55	10:40
1600-1629	11:25	11:10	10:55	10:40	10:25
1630-1659	11:10	10:55	10:40	10:25	10:10
1700-1729	11:00	10:40	10:25	10:10	9:55
1730-1759	11:00	10:30	10:10	9:55	9:40
1800-1829	11:00	10:30	10:00	9:40	9:25
1830-1859	11:00	10:30	10:00	9:30	9:10
1900-0359	11:00	10:30	10:00	9:30	9:00
0400-0414	11:10	10:40	10:10	9:40	9:10
0415-0429	11:25	10:55	10:25	9:55	9:25
0430-0444	11:40	11:10	10:40	10:10	9:40
0445-0459	11:55	11:25	10:55	10:25	9:55
0500-0514	12:10	11:40	11:10	10:40	10:10
0515-0529	12:25	11:55	11:25	10:55	10:25
0530-0544	12:40	12:10	11:40	11:10	10:40
0545-0559	12:55	12:25	11:55	11:25	10:55

The daily FDP schedule (and its mandatory implementation on all EU countries) is the most significant change the NPA makes to its predecessor, Subpart Q. The weekly, monthly, and annual FDP limits remain at 60, 190, and 1,000 respectively, al-

²¹⁹ *Id.*

²²⁰ *See infra* Table D.

²²¹ *See supra* Tables A and C.

²²² EASA NPA, *supra* note 174, at 223; *see* NPRM, *supra* note 6, at 55,888-89, tbl.B.

though the wording has been slightly modified to close the loopholes discussed above.²²³ Notably, limits on daily flight time remain absent in the EU's proposal, allowing pilots to spend much more of their FDP flying.²²⁴

European pilot groups critical of the EU's proposal claim that the NPA is inferior to the NPRM or the UK rules in providing science-based limits on flight and duty times.²²⁵ Their concerns are justifiable, given the NPA's more aggressive FDP table combined with the absence of any daily flight time limitations.²²⁶ While the proposal may be less protective of fatigue caused by extended duty and flight time hours, pilot rest periods remain longer in the EU proposal than the NPRM, allowing flightcrews more opportunity for recovery sleep. The NPA provides at least twelve hours of rest (ten if away from home base) compared to nine hours under the NPRM.²²⁷ Additionally, the NPA is more protective of weekly rest, allowing thirty-six hours, including two local nights, versus thirty hours under the NPRM.²²⁸ Table C, above, compares flight time and duty limitations for the EU's Subpart Q, the NPA, the UK's CAP-371, and the NPRM.

IV. THE NPRM'S EFFECT ON THE INDUSTRY

The final NPRM published by the FAA was a collaborative effort by industry representatives, pilot unions, and the FAA members of the ARC.²²⁹ As such, the proposal represents a compromise among all stakeholders.

A. CARRIERS

The biggest concern for carriers under the NPRM is the shift in responsibility required by several sections of the proposal. The NPRM now makes carriers at least partly responsible for the pilot's fitness for duty and rest time—both requirements that, up to now, have been the sole responsibility of the pilot.²³⁰ This

²²³ EASA NPA, *supra* note 174, at 226.

²²⁴ *See id.*

²²⁵ *A Big Step for Aviation Safety – In the Wrong Direction – EU Agency Publishes Inadequate Pilot Fatigue Rules*, EUROPEAN COCKPIT ASS'N (Dec. 20, 2010, 4:03 PM), <http://www.eurocockpit.be/stories/20101220/a-big-step-for-aviation-safety-in-the-wrong-direction-eu-agency-publishes-inadequat>.

²²⁶ *See discussion supra* Part III.D.

²²⁷ EASA NPA, *supra* note 174, at 228; NPRM, *supra* note 6, at 55,852.

²²⁸ EASA NPA, *supra* note 174, at 14.

²²⁹ NPRM, *supra* note 6, at 55,853.

²³⁰ *See id.* at 55,874–75.

shift will likely mean structural changes for carriers, including how they staff flights and recruit new pilots.

1. *Commuting Time: Accountability Issues*

Under § 117.25(d) of the NPRM, the nine-hour rest period begins only after “the flightcrew member reaches the hotel or other suitable accommodation.”²³¹ This seemingly minor change in phrasing is a major departure from existing regulations that start the rest time “clock” once a pilot is relieved of duty.²³² By refusing to allocate commuting time to either a pilot’s rest time or duty period, the FAA has made accounting for this time by carriers difficult, if not impossible.

The rule’s practical application, even in a layover city, presents significant issues. As the Regional Airline Association (RAA) points out,

[t]here is no effective way that a [carrier] can take responsibility for ensuring that a flightcrew member on a long layover in the city where he may actually reside is getting ALL of the rest that he is scheduled to be given, other than by requiring the flightcrew member to utilize the provided facility.²³³

Section 117.25(d) assumes that carriers are providing rest facilities during layovers, which is not required under either the current regulations or the NPRM.²³⁴ It also appears to make the carrier responsible for assuring that the accommodation is suitable.²³⁵ If the carrier does not provide a designated hotel, how will it assure that an accommodation is suitable? If the pilot chooses to rest somewhere other than the provided facility (assuming one is provided), should the carrier be responsible for assuring that this rest facility is suitable? Ultimately, when rest is scheduled in a layover city, § 117.25(d) will likely force carriers to either provide a rest facility and/or mandate that rest be taken in a hotel or other facility of equal distance to the airport in each city where it schedules rest.²³⁶ Even under this scheme, how would rest time possibly be managed? What if a pilot

²³¹ *Id.* § 117.25(d), at 55,888.

²³² See 14 C.F.R. § 121.471 (2010).

²³³ REGIONAL AIRLINE ASS’N, DOCKET NO. FAA 2009-1093 FLIGHTCREW MEMBER DUTY AND REST REQUIREMENTS NPRM, SUBMISSION OF COMMENTS 68 (Nov. 15, 2010) [hereinafter RAA COMMENT], *available at* <http://www.regulations.gov/#!documentDetail;D=FAA-2009-1093-2303> (click on image displaying “PDF”).

²³⁴ See NPRM, *supra* note 6, at 55,866.

²³⁵ See, e.g., *id.* at 55,864.

²³⁶ RAA COMMENT, *supra* note 233, at 68–69.

chooses to layover in a location other than that provided by the airline? How will the carrier know when he has received the minimum required rest period and can be scheduled again?

This rule makes even less sense when the rest period is scheduled at the pilot's domicile. In the FAA's Response to Clarifying Questions, the agency addressed the carrier's obligation to account for travel time when a pilot commutes home from a domicile:

Regardless of whether the flightcrew members live at their home domicile or in a different theater, the certificate holder is expected to calculate the typical length of time it would take the flightcrew member to return home, just as it would be required to calculate the typical length of time it would take to get a flightcrew member to a hotel. Since transportation can never be considered rest, certificate holders need to have some cognizance of where their flightcrew members live and whether they are likely to be resting in a hotel or at home.²³⁷

The proposal and clarifying statements make carriers responsible for the travel time, no matter the distance traveled or hours lost. This provision seems overly burdensome on carriers who currently exercise no control over the commuting practices of their pilots.²³⁸ "A carrier can control the scheduling of a rest opportunity between flights. It cannot control an individual pilot's private life and activities when he or she is off duty."²³⁹ This will likely prove to be an unworkable scheme that will need to be revised before a final rule is implemented.

The FAA makes no explanation as to why the carriers are now responsible for the commuting practices of its crew. In fact, the agency appears to have gone to great lengths to avoid restricting commuting, the very practice that highlighted pilot rest deficiencies and spurred the new legislation.²⁴⁰ The FAA essentially uses § 117.25(d) to punt the issue back to carriers. First, by not counting commuting time as part of a pilot's rest period, the FAA eliminated any incentive for pilots to practice responsible or reasonable commuting—commuting time under the NPRM

²³⁷ FAA RESPONSE TO CLARIFYING QUESTIONS, *supra* note 127, at 20.

²³⁸ See RAA COMMENT, *supra* note 233, at 68-69.

²³⁹ COMMENTS OF THE AIR TRANSPORTATION ASSOCIATION OF AMERICA, INC. IN THE MATTER OF NOTICE OF PROPOSED RULEMAKING FOR FLIGHTCREW MEMBER DUTY AND REST REQUIREMENTS 51 (Nov. 15, 2010) [hereinafter ATA COMMENT], *available at* <http://www.regulations.gov/#!documentDetail;D=FAA-2009-1093-2333> (click on image displaying "PDF").

²⁴⁰ See NPRM, *supra* note 6, at 55,874; RAA COMMENT, *supra* note 233, at 68.

is essentially additional time off the clock.²⁴¹ This puts pilots who either practice responsible commuting or live locally at an unfair disadvantage because they are not allowed the additional off-duty time. Ultimately, this reduces the overall hours available for crew scheduling, driving the carriers' labor costs up. If the NPRM becomes law, carriers will be forced to either absorb the additional labor cost, passing the increase to consumers, or set parameters on commuting, to the extent carriers can negotiate with pilot unions.

Regulations should not require carriers to account for a crewmember's whereabouts during a rest period. On one hand, it is unrealistic to think that a nine-hour rest period equates to an eight-hour sleep opportunity when that rest period includes travel time.²⁴² But, the answer is not to make carriers responsible for the travel time, a factor they have no control over. Carriers have a responsibility to provide adequate rest time, but it is the pilot's responsibility to make sure they use rest time for actual rest. Commuting is a personal decision that comes with responsibility. As FAA Administrator Randolph Babbitt stated, "We cannot regulate professionalism.' No matter how many rules, regulations, advisories, mandatory training sessions, voluntary training sessions—pull them all together, and it still comes down to us—and by *us*, I mean every pilot."²⁴³

The appropriate action is to include a buffer zone in the rest period to allow for responsible commuting. This would increase the rest time for pilots to allow for commuting without shifting the entire burden of commuting onto carriers. Thus, § 117.25(d) should be re-written to set the required rest period at ten hours from release of duty for travel in a single theater and twelve hours release of duty from operations into a new theater, the requirement originally proposed by the ARC and supported by the Air Transport Association (ATA).²⁴⁴ This would shift the responsibility for rest and responsible commuting back to the appropriate party—pilots—while also providing a buffer zone to account for at least part (if not all) of a pilot's commute.

Additionally, drafting the rest requirements as suggested would also ease the burden on international operations. Under

²⁴¹ See NPRM, *supra* note 6, at 55,874–75.

²⁴² See Sully Letter, *supra* note 148.

²⁴³ J. Randolph Babbitt, Adm'r, Fed. Aviation Admin., Speech to ALPA Air Safety Forum We Can't Regulate Professionalism (Aug. 5, 2009) (transcript available at http://www.faa.gov/news/speeches/news_story.cfm?newsId=10680).

²⁴⁴ ATA COMMENT, *supra* note 239, at 51.

the NPRM, rest periods on international operations could be greatly reduced from even the current regulations.²⁴⁵ This suggested change would allow pilots extra time in a new theater to adjust their internal clock while providing carriers predictable and accountable rest periods to schedule crews.

2. *Fitness for Duty: Responsibility Issues*

Under the current regulations, it is the pilot's sole responsibility under FAR Part 91 that the pilot arrive "fit for duty."²⁴⁶ The NPRM modifies this requirement, making "fitness for duty" a shared responsibility between pilot and carrier.²⁴⁷ Under the NPRM, carriers may not assign duty "if the certificate holder believes that the flightcrew member is too fatigued to safely perform his or her assigned duties."²⁴⁸ This suggests that a carrier must take responsibility whenever an issue of fitness for duty is raised. However, a later Advisory Circular issued by the FAA seems to take the carrier requirement much further: "Air carriers must assess the crewmember's state when they report to work. If the air carrier determines a crewmember is too tired, it may not allow the crewmember to fly."²⁴⁹ The Advisory Circular seems to require that carriers perform "fitness for duty" tests on its crewmembers before each departure. These conflicting directives have carriers concerned about just how much responsibility they will have over determining a pilot's fitness to fly.²⁵⁰

Certainly, increased monitoring by peers and carriers is a welcome change. However, it is not feasible or appropriate for flightcrew professionals to present themselves to a superior before every flight. A balanced solution would be to utilize the current FAA-approved "reasonable cause" process that is used when a pilot is suspected of intoxication.²⁵¹ Under the reasonable cause test, the FAA must have a reasonable basis to believe a pilot has unlawfully used alcohol in connection with his or her duties to submit the pilot to testing.²⁵² Using this process for fatigue would allow checks and balances without unduly burdening carriers or operations because only those pilots suspected of

²⁴⁵ See discussion *supra* Part II.C.

²⁴⁶ NPRM, *supra* note 6, at 55,874.

²⁴⁷ *Id.* at 55,875.

²⁴⁸ *Id.* § 117.5(b), at 55,885.

²⁴⁹ FITNESS FOR DUTY DRAFT AC, *supra* note 7, at 3.

²⁵⁰ See, e.g., RAA COMMENT, *supra* note 233, at 15.

²⁵¹ *Id.* at 15.

²⁵² 14 C.F.R. § 91.17(d) (2010).

fatigue by coworkers or employers would be required to submit to testing. However, these tests to determine fatigue may not yet be available to airline staff.²⁵³

But, even these changes would not address the root of the problem, which remains untouched under the current NPRM. The FAA has yet to include any regulation dealing with why pilots are failing to report issues of fatigue. Many pilots face threats of discipline from carriers—including termination—if they reject flights because they are too fatigued.²⁵⁴ The NPRM needs to include a provision that eliminates this type of job pressure by preventing the operator from disciplining a pilot who calls in fatigued.²⁵⁵ This would further encourage carriers to adopt scheduling practices that result in well-rested pilots reporting for duty.

3. Crew Scheduling Changes

Unlike fitness for duty and rest requirements, some of the NPRM's provisions are a welcome change to carriers, allowing them additional flexibility in operations. Most notably, the NPRM allows domestic flight augmentation for the first time.²⁵⁶ Under the NPRM, augmentation can extend a flightcrew member's FDP to up to eighteen hours and flight time up to sixteen hours.²⁵⁷ While this practice was originally designed for long-distance flights where a crew swap was not possible,²⁵⁸ carriers can now augment any flight with three segments or less,²⁵⁹ dramatically increasing their efficiency and reducing operation costs. Given the composition of the ARC, it is easy to see how increased rest—a “win” for pilots—compensates for by increased hours and efficiency of carrier operations. This move appears purely motivated by the strategic considerations of the ARC, as increasing a crewmember's flight time by as much as

²⁵³ See RAA COMMENT, *supra* note 233, at 15.

²⁵⁴ Joan Lowy, *Lawmakers Seek to Fix Pilot Fatigue*, ASSOCIATED PRESS (June 11, 2009), http://www.cbsnews.com/stories/2009/06/11/national/main5081676.shtml?source=related_story.

²⁵⁵ This position is supported by CAPA. See COAL. OF AIRLINE PILOTS ASS'NS, COMMENTS ON FAA 2009-1093 “FLIGHTCREW MEMBER DUTY AND REST REQUIREMENTS” 9 (Nov. 15, 2010), available at <http://www.regulations.gov/#!documentDetail;D=FAA-2009-1093-2155> (click on image displaying “PDF”).

²⁵⁶ See NPRM, *supra* note 6, at 55,863–64.

²⁵⁷ *Id.* at 55,889, tbl.C.

²⁵⁸ See Sully Letter, *supra* note 148.

²⁵⁹ See NPRM, *supra* note 6, at 55,866.

25% from current regulations²⁶⁰ clearly has an adverse effect on pilot fatigue.

4. *Cargo Carriers*

Unlike passenger carriers who will be able to offset the pilot-protecting provisions with industry-enabling provisions, cargo carriers do not fare as well under the NPRM. Currently, cargo carriers operate under their own regulations that provide no preflight rest requirement and no restrictions on night duty operations.²⁶¹ Under the NPRM, cargo carriers will now operate under the same regulations as passenger carriers, requiring them to provide the same preflight rest period under § 117.25(d).²⁶² Additionally, the NPRM restricts night operations, limiting night duty periods to three consecutive nights.²⁶³ This provision will hit cargo carriers especially hard, since their entire operational structure is based on a flight schedule that departs in the early evening from an origination point, flies to a domestic sort facility, and then returns to the origination point in the early morning.²⁶⁴ The effect of these two provisions will be a dramatic increase in labor and operational costs for carriers.²⁶⁵ However, unlike passenger carriers, the benefits are greatly reduced. Cargo carriers argue that since they do not carry passengers, the benefit—the risk of human loss in a fatal accident—is miniscule compared to passenger carriers.²⁶⁶ For example, compare a passenger-configured Airbus A300, which can carry up to 315 passengers and nine crewmembers, with a UPS Airbus A300, which carries two crewmembers and 1,200 packages.²⁶⁷ The FAA's cost-benefit analysis is flawed because it fails to make any distinction between the two.²⁶⁸ Thus, before any sweeping changes are made to bring the cargo carrier industry under the same general regulations, the FAA should consider their unique operational structure and the costs and benefits such a proposal would impose specifically on this sector.

²⁶⁰ For unaugmented flights, FAR Part 121 sets maximum flight time at eight hours and the NPRM allows up to ten hours. *Id.* at 55,852.

²⁶¹ Cargo Operations, *supra* note 15, at 13.

²⁶² NPRM, *supra* note 6, § 117.25(d), at 55,888.

²⁶³ *Id.* § 117.27, at 55,888.

²⁶⁴ See UPS COMMENT, *supra* note 111, at 18.

²⁶⁵ *Id.* at 38-40.

²⁶⁶ *Id.* at 18-20.

²⁶⁷ *Id.* at 19.

²⁶⁸ See NPRM, *supra* note 6, at 55,876-77.

Ultimately, the NPRM is both a win and a loss for passenger carriers. New rest requirements will shift a bulk of the financial burden and responsibility to carriers to see that adequate rest time is provided, even if commuting is involved. On balance, carriers will now be permitted, and will likely take advantage of, domestic crew augmentation and the efficiencies and cost savings that follow. Conversely, cargo carriers will be the big losers under the NPRM. The labor and operational costs will be considerable, but unlike passenger carriers, cargo carriers benefit little from the proposal, given their operational structure.

B. FLIGHTCREW MEMBERS

1. *Increasing Flight Hours: Is This Really Detrimental to Pilots?*

The NPRM is also both a win and a loss for flightcrew members. Under the new proposal, pilots will receive significantly more rest, up from eight hours from release to nine hours at the hotel.²⁶⁹ However, pilot groups and individuals are focusing their attention on the flight time restriction that would actually increase a pilot's flight time by 25%, up to ten hours a day.²⁷⁰ Captain Paul Onorato, President of the Coalition of Airline Pilots Associations (CAPA), which represents over 28,000 pilots, states, "‘you cannot make a pilot *less* fatigued by requiring them to fly *more* hours.’"²⁷¹ While there may be truth to this statement, the NPRM is a much more conservative schedule compared to CAP-371, Subpart Q, or the NPA, none of which include a daily flight time restriction.²⁷²

Moreover, the increase in flight time hours will likely actually benefit pilots. Pilots are only paid for the hours they actually fly, not hours spent on duty.²⁷³ The NPRM decreased FDP from a flat sixteen-hour maximum to a variable nine to thirteen hours, depending on start time.²⁷⁴ A decrease in duty time coupled with an increase in flight time means that pilots will be spending

²⁶⁹ See discussion *supra* Part II.C.

²⁷⁰ Press Release, Coal. of Airline Pilots Ass'ns, CAPA Urges FAA to Change NPRM on Flight and Duty Time (Sept. 16, 2010), *available at* http://www.capapilots.org/Websites/capa/Blog/1223883/CAPA_FTDT%20Press%20Release_Sept%202010.pdf.

²⁷¹ *Id.*

²⁷² See discussion *supra* Part III.

²⁷³ See David Hellerström, et al., *The Best Rest, Revisited: A Comparison of Differing Regulatory Efforts to Control Pilot Fatigue*, FLIGHTSAFETY.ORG 6 (2010), <http://flight-safety.org/files/best-rest-revisited.pdf>.

²⁷⁴ NPRM, *supra* note 6, at 55,852.

a greater percentage of their workday behind the controls earning a living and increasing their quality of life, according to a recent study.²⁷⁵ The study compared the NPRM to the current regulations using typical flightcrew scheduling for domestic two-pilot operations in an Airbus A320 aircraft.²⁷⁶ Researchers found that average flight hours per day increased less than 1%, from 6:43 to 6:47.²⁷⁷ This data indicates that under real-world conditions, domestic pilots are unlikely to ever actually fly the ten hours per day that the NPRM allows. Notably, the study also found that under the NPRM, pilots would be spending a greater percentage of their duty period at the controls.²⁷⁸ Under current regulations, the ratio of FDP hours to flight hours was 1.6, but under the NPRM that ratio dropped to 1.48, increasing a pilot's flying hours by 7.5%.²⁷⁹

The NPRM is, on the whole, a huge step forward for pilots. First, the increase in rest time from eight hours from release to nine hours at the hotel will allow them significantly more rest time, especially if the FAA does not count any commuting time against a pilot's rest. Secondly, the NPRM simultaneously limits a pilot's FDP time and extends daily flight time, increasing their efficiency and, ultimately, their salary. However, it is unclear at this time what effect domestic augmentation may have on pilot efficiency.

V. CONCLUSION

The NPRM goes a long way towards improving sleep opportunities for pilots and reducing their overall fatigue. The proposal is based on sleep science and reflects our current understanding of how circadian rhythms affect fatigue and performance. This has been the recognized practice of countries like the United Kingdom since 2004, with the rest of Europe to follow in 2012 under the NPA.

While the proposal is a vast improvement over the existing decades-old regulations, the NPRM still presents several significant areas of concern that must be addressed before a final rule is implemented. Much of the concern stems from the differing language in the NPRM and the FAA's subsequent Advisory Cir-

²⁷⁵ Hellerström, *supra* note 273, at 6.

²⁷⁶ *Id.* at 4.

²⁷⁷ *Id.* at 12, tbl.1.

²⁷⁸ *Id.*

²⁷⁹ *Id.*

culars that depart from the statutory language significantly. Two specific areas of concern are the rest period and fitness for duty. The FAA must be clear in its final rule just about how much responsibility carriers will have over these areas.

Additionally, the FAA left unaddressed several requirements that should be included in the final rule. First, carriers should be required to provide additional and improved rest facilities, especially in places where they know a majority of the flight crew is commuting to work. Secondly, the NPRM should set limits on commuting during a pilot's WOCL that would be the primary responsibility of the pilot. Most importantly, the FAA must include a no-fault fatigue call-in policy in the final rule. A pilot who is fatigued should not have to consider potential consequences to his career when making a decision that is in the best interest of safety. The NPRM is a welcome step forward for pilot safety, but there is more work to be done.