AIR TRANSPORT ASSOCIATION

Briefing for
Office of Information and Regulatory Affairs

Federal Aviation Proposed Rule:
Flightcrew Member Duty and Rest Requirements
Docket No. FAA-2009-1093, RIN 2120-AJ58

July 25, 2011

Overview

- FAA's stated purpose is to rewrite longstanding operational flightcrew member duty and rest requirements to mitigate fatigue
- ATA members share the FAA's goal but any change must be based on operational and safety data and science. Our safety record, active participation in the Commercial Aviation Safety Team, and the Flight and Duty Time Aviation Rulemaking Committee reflects our commitment to safety.
- We cannot support the proposal as written.
  - It includes items with high cost and operational impacts not related to safety and
  - Fails to incorporate science-based concepts as described by fatigue and sleep experts.
- The FAA's safety analysis and benefit-cost analysis were flawed. From a safety and benefit perspective, the agency did not provide specific data directly linking new provisions to areas of concern. The highest impact cost provisions were unrealistically minimized and whole categories of cost items were excluded.
  - Actual benefit likely to be 40% less than FAA estimate
  - Actual cost nearly 16 times FAA estimate
- Even without correcting the BCA, the FAA determined that costs would outweigh the benefits.
- The proposal needs to be vastly improved and revised under Executive Order 13563 and 12866 principles and requires a high level of scrutiny and review before proceeding.
- OMB should ensure FAA provides a "reasoned determination" that benefits outweigh costs seeking to improve the actual results of regulatory requirements. These goals can only be met with substantial revision to the proposal and a renewed effort to accurately measure the impact of any final rule and issuance of a Supplemental Notice of Proposed Rulemaking.

Why a Supplemental NPRM is Needed

- Any FDT proposal must consider all segments of the aviation industry and decades of safe operational experience under current FAA regulations.
- Schedule reliability, flight time limits, and prescriptive extensions to scheduled FDPs impose high costs without mitigating fatigue and should be removed
- FAA should focus on three core elements for mitigating fatigue: daily FDP limits, cumulative FDP limits, and minimum rest requirements
  - EASA issued a drastically different FDT proposal that focused on these core elements
- A well-developed FRMS scheme should also be included to recognize existing fatigue mitigation measures – any FRMS scheme must be fully mature, clear, well defined and ready to implement
- Even if the agency corrects shortcomings or removes unjustified provisions:
  - The public should have an opportunity to review and comment on new justifications/safety benefits in a supplemental proposal
  - Any changes to correct the original proposal to meet EO 12866 and EO 13563 requirements would have to be so dramatic as to prevent:
    - "an open exchange " of information among government officials, experts, stakeholders, and the public (M-11-10, p2; EO 13563, Section 2(a))
    - Input from "the views of those who are likely to be affected" (M-11-10, p2; EO 13563, Section 2(c))
    - "the opportunity to react to (and benefit from) the comments, arguments, and information of others during the rulemaking process" (M-11-10, p2)

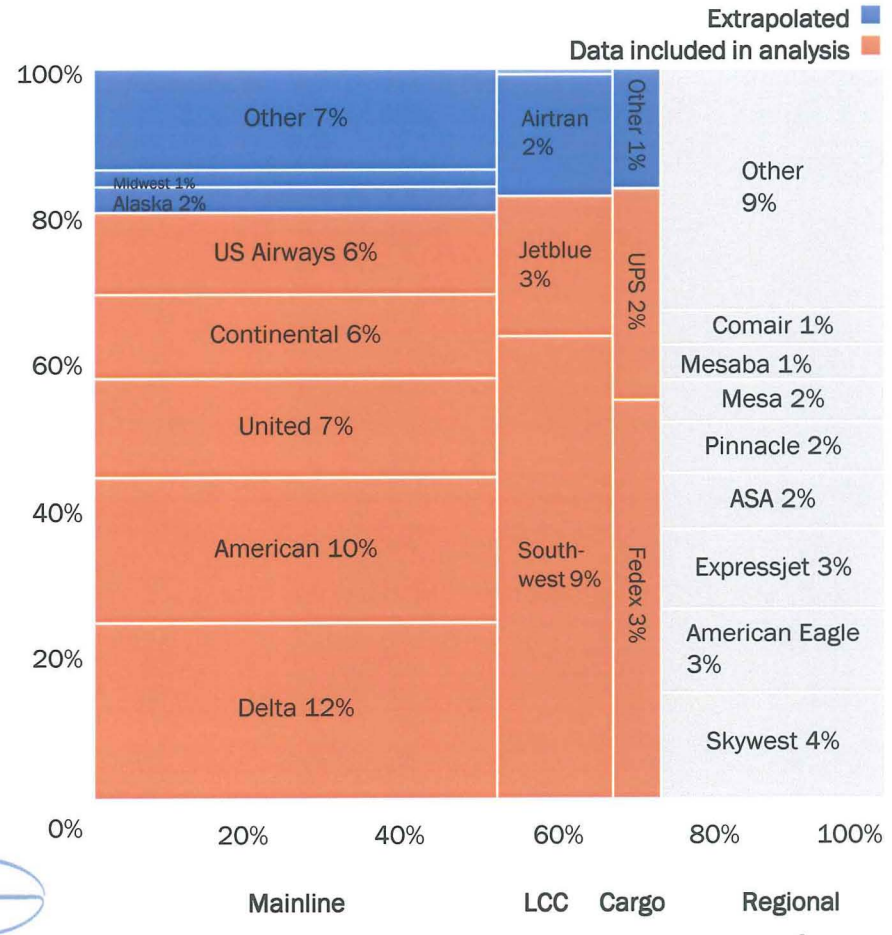
Analysis Conducted

Types of Analysis Conducted

- Reviewed FAA conclusions regarding accidents it cited as the source of its benefits analysis
- Reviewed other FAA assumptions, e.g., flight crew costs, optimization, reduced absenteeism
- Schedule and cost modeling using carrier crew schedules and rostering data. Representative airlines provided raw data for Oliver Wyman to assess the impact on mainline hub and spoke, low cost carrier, and cargo carrier segments
- Aggregation of individual carrier estimates and analyses for some categories of analysis, such as the cost of training and crew rest infrastructure

Unlike FAA "black box" approach, Oliver Wyman assumptions are clearly stated and its modeling results can be replicated by a 3rd party. We welcome a validation of these findings.

Industry Distribution of block hours 2009



FAA Economic Analysis Overstates Benefits and Grossly Understates Costs

- Actual benefit likely to be 40% less than FAA estimate
- Actual cost nearly 16 times FAA estimate
- Actual cost includes only impact to mainline LCC, large cargo and nine of fourteen cost items

	10-year Nominal Cost ($ millions)	
	FAA Regulatory Impact Analysis	Oliver Wyman Analysis*
Benefits	$659.4	$395.6
Costs	$1,254	$19,641
Cost/Benefit Ratio	1.9:1	50:1

	10-year NPV Cost ($ millions)	
	FAA Regulatory Impact Analysis	Oliver Wyman Analysis*
Benefits	$463.8	$278.3
Costs	$803.5	$14,439
Cost/Benefit Ratio	1.7:1	52:1

* Oliver Wyman NPV calculation uses same discount rate as FAA, 7%

Why did the FAA misestimate benefits and costs?

Benefits –

- FAA labeled accidents as fatigue-related even when NTSB found otherwise
- FAA did not apply its own stated methodology of screening accidents, instead pulling in unrelated accidents from outside its database

Costs –

- By omitting the cost of schedule buffering required by multiple provisions of the NPRM, the FAA omitted the major source of cost to the industry
- FAA "assumed away" other important cost impacts, particularly in areas where it lacked modeling capabilities
- FAA used unrealistically low labor costs
- FAA makes clear that its cost estimates only include those related to individual flight duty periods and do not include the substantial costs incurred as a result of the impact of new duty limits imposed over longer periods of a week or a month

Benefits Estimated by FAA Are Substantially Overstated – 40% of the Accidents Cited Were Improperly Classified

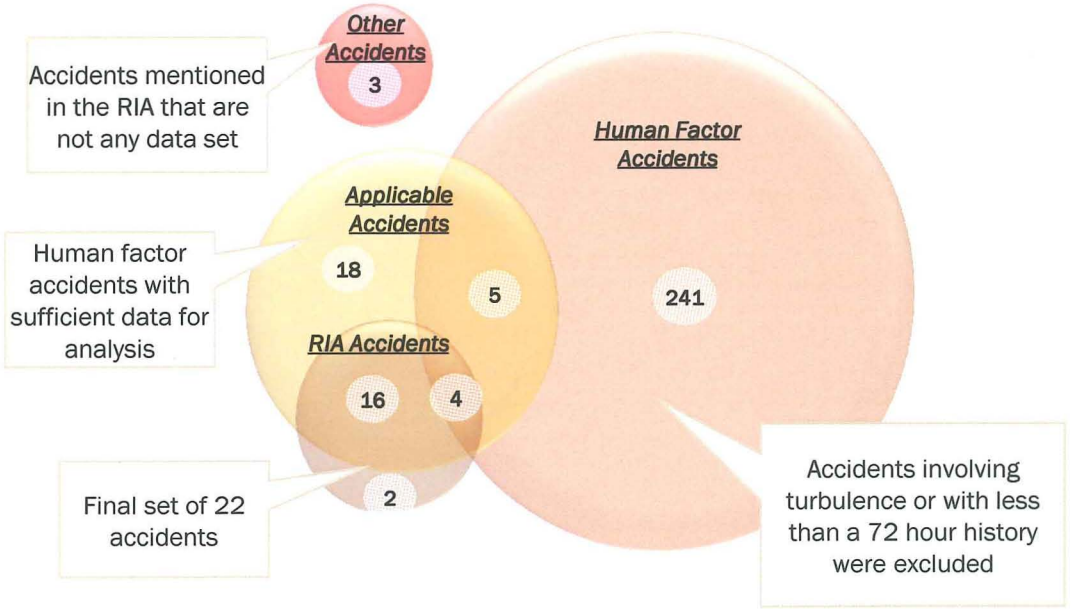
FAA methodology

- **FAA begins with set of 250 accidents, which it then winnows down to 43 accidents that are "human factors" related and a smaller set of 22 accidents, which it concludes are "fatigue-related" with sufficient data for analysis**
- **From these 22 accidents, the FAA extrapolates and projects future accident avoidance benefit results**

Problems with FAA analysis:

- **Contrary to FAA report, the 22 accidents are not a subset of 43 accidents, which are not a subset of the 250 accidents. At a minimum, the chain of analysis is broken and cannot be replicated.**
- **Actual FAA dataset from which it has drawn conclusions has 20 accidents, not 22**
- **Of these 20 accidents, which the FAA cites as avoidable under the NPRM, 40% should be excluded because they have nothing to do with pilot fatigue or the type of flying regulated by the NPRM**
- ***In 3 of the 20 cases, NTSB specifically determined that fatigue was not a factor***
- **Numerous other analytic problems, as explained in the report**
- **Campbell Hill report delves into the accident analysis in greater detail**

FAA Accident Analysis Sets – The FAA reported that each smaller set is a subset of the original set of 250 accidents, but that is not the case



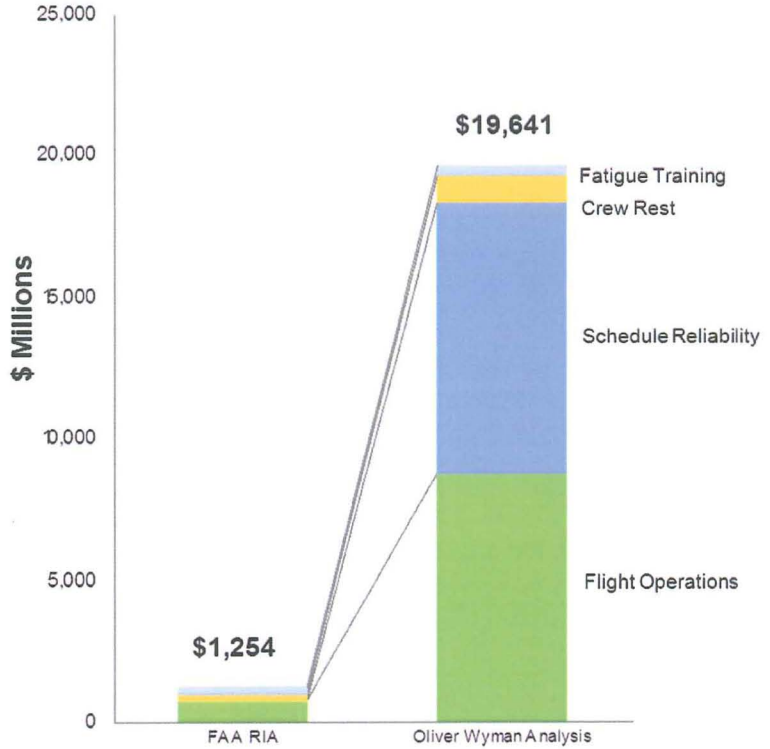
Costs Estimated by FAA Are Grossly Understated – Actual Costs Are at Least 15 Times Higher

Most Costly Items

- **Schedule reliability – Proposed rule would require airlines to add substantial buffers to their flights to meet new 95% schedule reliability standard. [Not found in EU or elsewhere; would not reduce fatigue]**
- **Flight duty period extensions – Proposed rule severely limits FDT schedule extensions – even when those extensions still would be within the new flight duty limits. [Not found in EU or elsewhere]**
- **Flight time limits – Proposed rule incorporates both block (actual flying time) limits and flight duty limits, and makes the block hour limit much more restrictive than current by prohibiting extensions to accommodate day-of-operation delays. [Not found in EU or elsewhere]**

Cost estimates for these three provisions:

- **Oliver Wyman estimate: 10-year cost $15.7 billion for mainline, LCC, and large cargo industry sectors**
- **FAA estimate: $765 million, which also includes the cost of other Flight Operations provisions.**
- **Note: FAA estimate of schedule reliability provision only includes the cost of monitoring schedule reliability**



	FAA RIA	Oliver Wyman Analysis
Fatigue Training	262	331
Crew Rest	227	928
Schedule Reliability	5	9,624
Flight Operations	760	8,758
Total	$1,254	$19,641

* Flight Operations bar in graph includes flight time limits, flight duty period extensions, and other provisions with much lower costs such as minimum rest between duties, day of operations reserve,

Full Cost of NPRM Substantially Exceeds Even Oliver Wyman Estimate

Extrapolating to Include Regionals

- Oliver Wyman cost estimate includes only mainline, LCCC, and large cargo
- FAA includes in addition regional, small cargo, small passenger, and charter passenger costs
- Extrapolating the cost of relevant provisions to regional carriers (the largest segment not included in the OW analysis) add $1.987 billion in costs

The Full Cost of Schedule Reliability Provisions

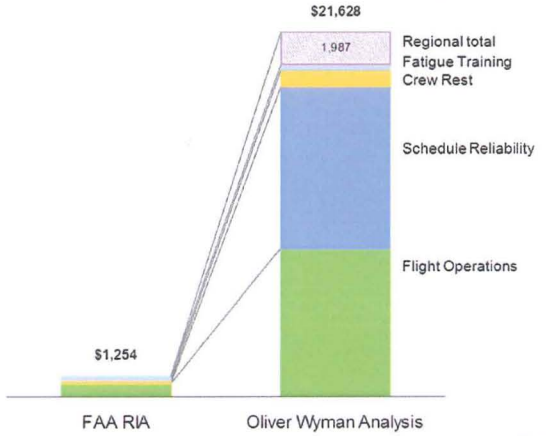
- As explained in the report, the OW cost estimate for the schedule reliability rule is based on the most flexible/favorable interpretation of the proposed rule. The $9.6 billion cost estimate may understate by as much as $50 billion the true cost of complying with the rule as written

Including Other Cost Categories

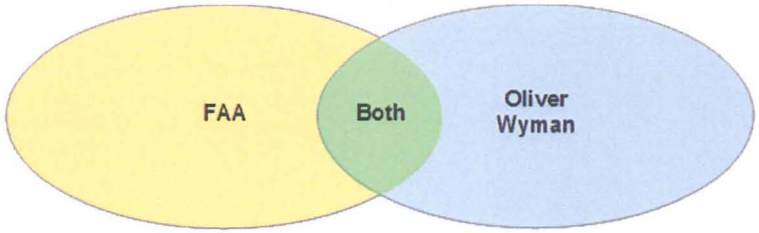
- As explained in the report, given the short time period to respond to the NPRM, the Oliver Wyman analysis includes some but not all cost impacts. E.g., it excludes the five cost categories listed in the orange box to the right
- A more complete analysis would also include the cost of rest requirements and several other provisions

NPRM Cost Estimate

10-Year Nominal Cost (Including Regional Carriers)



Provisions Analyzed by Oliver Wyman and FAA (RIA)



FAA
Topic area not included in Oliver Wyman report

- Rest Requirements
- Flight Duty Period
  - Minimum Rest Between Duties
  - Reduced Augmentation
  - FMRS Development Costs
  - Flight Engineer Supplemental Operations

Both
Topic area appears in both reports

- Flight Time Limits
- Schedule Reliability
- Fatigue Training
- Crew Rest Facilities

Oliver Wyman
Topic area not included in FAA report

- Flight Duty Period
  - Day of Operations Reserve
  - Cumulative Duty Time from Short Call Reserve
  - FDP Extension
  - Three Consecutive Nights
  - Collective Bargaining Agreements (partially included in RIA analysis)

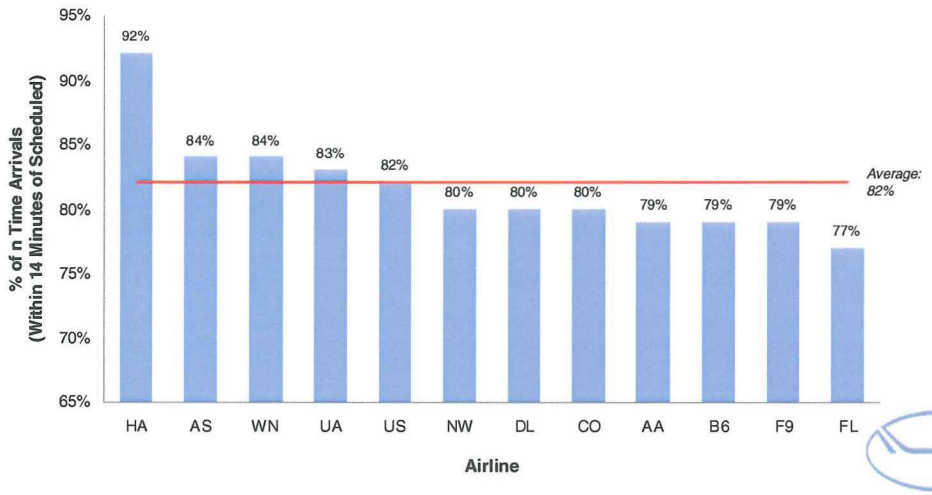
Other Deficiencies with FAA Regulatory Impact Analysis

Subject	Comment
5% reduction in absenteeism assumed to result from NPRM	No basis for FAA assumption
Collective bargaining agreement impacts on the costs/benefits of the rules	FAA assumes CBAs will be adapted to match rules without any cost – not realistic
25% optimization assumption	FAA assumes that airlines will find a way to optimize implementation so as to save 25% of the estimated implementation costs – no basis
Cumulative impacts	FAA specifically excludes whole categories of analysis: "Only limits relating to individual flight duty periods were applied. Cumulative limits were not applied due to data limitations."
Flight crew costs	FAA appears to have used raw average salary data, without payroll taxes, pension, and benefits – which substantially understates true costs
Cancellation, buffer, and delay costs	FAA assumes that all provisions, regardless of how restrictive, can be implemented without the carriers incurring any cancellations, delays, or adding schedule buffers but provides no other means to meet "hard time limits
Actual versus scheduled performance	FAA prohibits carriers from extending scheduled flight duty times and scheduled flight times even under circumstances when the extended times would be well under the proposed maximums. This requirement (unique in international safety regulations) appears to add enormous costs without aiding safety or reducing fatigue

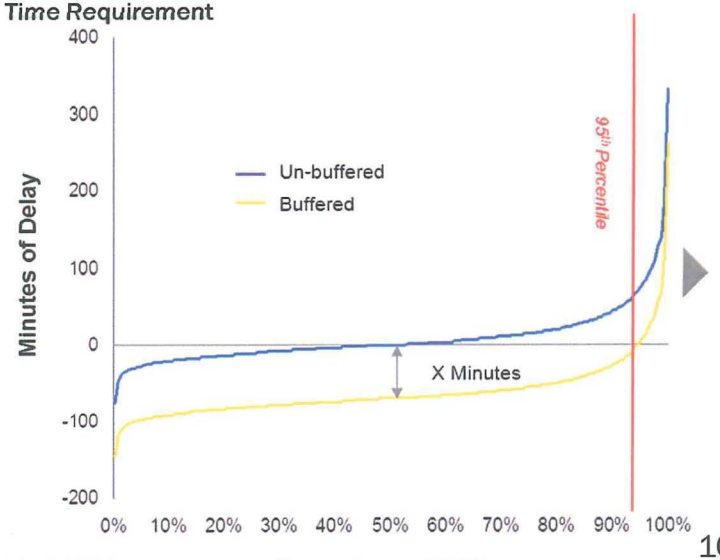
Examples of Specific Provisions – Schedule Reliability

- NPRM requires carriers to achieve 95 percent scheduled/actual Flight Duty Period rate, which means 95% of flights must arrive as scheduled with 0 minutes tolerance for lateness
- Currently, most airlines are structured to achieve between 50% and 60% actual vs planned
- To achieve 95 percent on-time rate (+/- 0 minutes), airlines will need to add schedule buffers (i.e., add block time)
  - Due to the lack of delay predictability all FDP's will need to be buffered
- This will substantially impact airline costs without improving safety or reducing fatigue:

Current 82% average on-time arrival rate (0-14 minutes) is equivalent to 50-60 % on-time (+/-0)



Schedule Adjustment Required to Meet 95% FDP Schedule On-Time Requirement

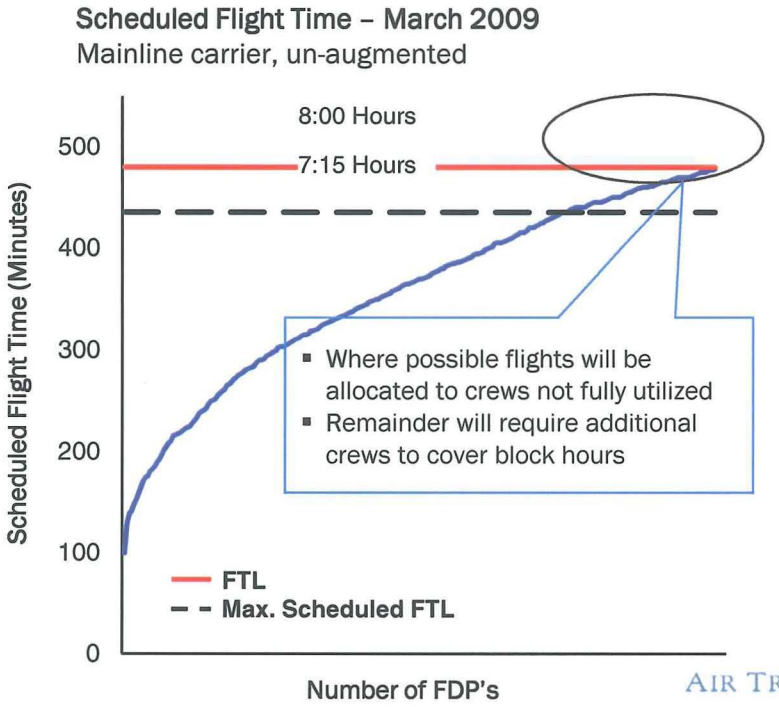


Source: US DOT Air Travel Consumer Reports 2009

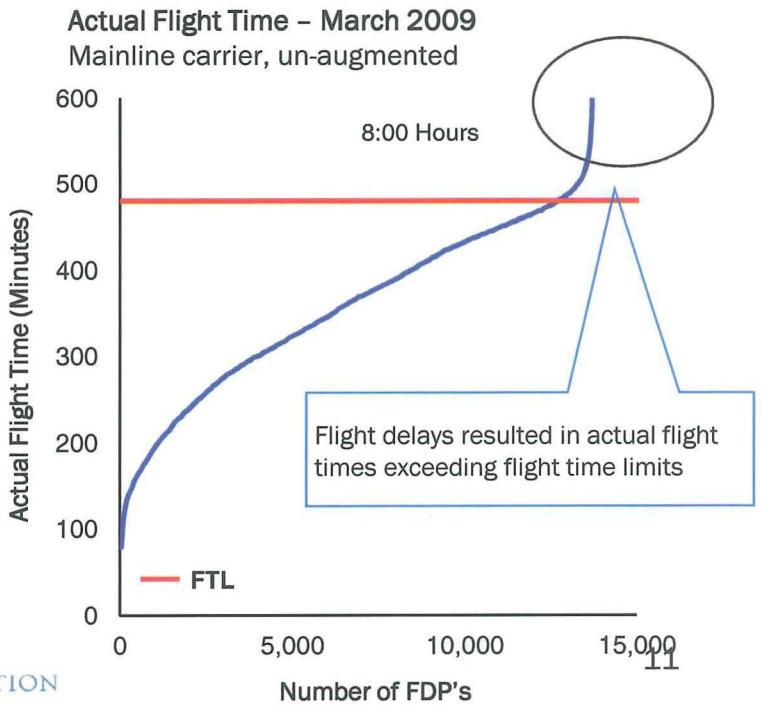
Examples of Specific Provisions – Flight Time Limits

- Current rule permits flight crew to operate a flight when due to circumstances beyond the carrier's control (such as adverse weather), the flight is not expected to reach its destination within the scheduled time.
- NPRM, however, makes flight time limits inflexible "hard limits" *even when total flight duty time remains under the new maximum*
- As a result, carriers must schedule for well under the flight time limits, and also must incur the cost of cancellations that occur as a result of delays beyond their control pushing flight time beyond the flight time limit

Must schedule well under flight time limit



Must cancel when bad weather results in hitting limit



Cost Summary

NPRM Provisions	Impact (Millions, Assuming 25% Optimization)	
	Oliver Wyman	FAA Regulatory Impact Analysis
Flight Time Limits*	10 Year Cost: $15,740 (Individual estimates provided in Report; these three provisions are interrelated, and cost of each depends on allocation assumptions)	10 year cost: $760 (Part of flight operations)
Schedule Reliability*		10 Year Cost: $5
FDP Extension*		Not quantified
Day of Operation Reserve	10 Year Cost: $826	Not quantified
Cumulative Duty Time from Short Call Reserve	10 Year Cost: $143	Not quantified
Crew Rest Infrastructure	10 Year Cost: $928	10 Year Cost: $227
NPRM Implementation	10 Year Cost: $1,967	10 Year Cost: $262
Three Consecutive Nights	10 Year Cost: $38	Not quantified
Totals (10 Year Additive)	$19,641 Nominal	$1,254 Nominal

Cost Summary after Removal of Schedule Reliability and Flight Duty Period Extension Provisions

NPRM Provisions	Impact (Millions, Assuming 25% Optimization)	
	Oliver Wyman	FAA Regulatory Impact Analysis
Flight Time Limits	10 Year Cost: $4,280	10 year cost: $760
Day of Operation Reserve	10 Year Cost: $826	Not quantified
Cumulative Duty Time from Short Call Reserve	10 Year Cost: $143	Not quantified
Crew Rest Infrastructure	10 Year Cost: $928	10 Year Cost: $227
NPRM Implementation	10 Year Cost: $1,967	10 Year Cost: $262
Three Consecutive Nights	10 Year Cost: $38	Not quantified
Totals (10 Year Additive)	$8,182 Nominal	$1,254 Nominal

EASA FDT Proposal

The European Aviation Safety Agency issued a flightcrew member Flight and Duty Time proposal this year that was drastically different from FAA:

- EASA did not include daily flight time limits
- Schedule Reliability is presented as guidance in EASA regulations
- FDP extensions are to maximum limits not to a flightcrew member's schedule
  - Preplanned extensions are limited to one hour over maximums, day of extensions are limited to two hours our maximums
- EASA flightcrew member rest periods remain the same
  - EASA: Minimum of 12 hours of rest at a pilot's home base, and 10 hours rest when away from a home base
  - FAA: currently has an 8 hour rest requirement and proposed a 9 hour rest requirement
- EASA proposal is much more flexible because it concluded:
- "the assessment of safety impacts for this RIA could not be based on statistical data from accidents and incidents as there was no statistically significant number of accidents and incidents for EASA-country operators."
- EASA focused on core areas directly related to fatigue as the FAA should

Executive Orders

Executive Orders 13563 and 12866 set out a number of regulatory principles, to which the FAA has not adhered in this rulemaking.

- **First, "[f]ederal agencies should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling public need...."**
  - **The FAA safety analysis did not demonstrate a compelling public need for the proposal. FAA should not include highly burdensome regulations with many provisions not related to safety and include only such provisions that directly address areas of concern.**
- **Second, "[e]ach agency shall assess both the costs and the benefits of the intended regulation and ... propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs."**
  - **The FAA's assessment of the costs and benefits of the NPRM was deeply flawed, and did not represent a "reasoned determination" because *the agency concluded that costs would outweigh benefits.***
- **Finally, "[e]ach agency shall base its decision on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation."**
  - **FAA admits that aspects of the proposal are not supported by science**
  - **FAA ignored highly relevant technical, economic, and operational information**

ATA members and outside fatigue and economics experts agree the FAA's proposal was flawed. For these reasons, the NPRM did not meet E.O. 13563 and 12886 standards, and should be <u>substantially reviewed and revised before proceeding to a Supplemental Notice of Proposed Rulemaking.</u>

Essential Changes Needed for a SNPRM

1. **The Final Rule should continue to recognize different operational models**
   - Any final rule should recognize and respond to different air carrier operational environments and models, including domestic and international passenger operators, domestic and international cargo operators, and on-demand (nonscheduled) charter operators.
   - Nothing in fatigue/sleep research suggests a need for a one-size-fits-all regulation.
   - Science-based guidelines, judiciously blended with many years of operational experience, will allow the various air carrier models to continue to operate safely.
2. **Remove proposed schedule reliability requirements, they have nothing to do with safety**
3. **Remove daily flight time limits, no other regulatory scheme in the world uses these limits**
   - Rest requirements, cumulative flight time limits, and daily and cumulative flight duty periods mitigate fatigue
4. **Allow FDP extensions to actual operations, eliminate the NPRM proposal limiting extensions to scheduled FDPs**
5. **Increase minimum rest requirements to 10 hours**
6. **Include a more fully developed FRMS program with clear standards, based on ICAO principles, years well in advance of a FDT final rule effective date that carriers can rely on to satisfy new requirements**
7. **Permit "split duty" rest on the ground for a minimum of 2 hours**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