## Safety

- FAA says the NPRM proposed to regulate factors that lead to fatigue in most individuals "to ensure that flightcrew members do not accumulate dangerous amounts of fatigue." 77 Fed. Reg. 330, 335 (January 4, 2012).
  - By excluding cargo operations from the scope of the rule, FAA tacitly acknowledges that it is allowing cargo flightcrews to accumulate "dangerous amounts of fatigue."
- FAA states it has determined that "the 16-hour unaugmented FDP [flight duty period] and the 30-hour augmented FDP permitted by existing supplemental flight, duty, and rest regulations *are almost always unsafe* for passenger operations." FR at 337.
  - FAA provides no basis to believe that such allowed duty periods would not be equally unsafe for cargo operations, particularly in light of FAA's prior statement that its rule addresses "Fatigue factors that apply universally." FR at 335.
    - Yet FAA continues to allow cargo operations to be governed by rules that allow flight duty periods that "are almost always unsafe."
    - The insertion of the word "passenger" in front of "operations" in various parts of the preamble to the Final Rule is a simply a half-hearted attempt to justify application of the Final Rule to passenger operations; the reality unstated in the Final Rule, but explicitly stated in the NPRM, is that the fatigue factors apply equally to cargo operations and would equally justify applying the Final Rule to cargo operations.

# Cost Benefit Analysis

# General Cost Benefit Analysis Deficiencies

- FAA's woefully inadequate cost-benefit "analysis" lists as benefits only "the value of an averted all-cargo fatal accident." 11/18/11 RIA p. 35. Fn. 20.
- FAA fails to explain why it assumes that the only benefit of applying the Final Rule to cargo carriers would be avoiding one fatal accident.
  - More than one fatal accident may be avoided.
    - For instance, although FAA apparently categorized a cited fatal accident involving a ferry flight as a passenger operation, the fatigue-inducing factors that contributed to the accident occurred during "a routine cargo flight" that crossed multiple time zones and involved back-of-the clock" operations.

- Thus, this accident, analytically, should be considered a cargo accident.
- Moreover, even non-fatal accidents can create significant economic harm, relating to aircraft damage; injuries to flightcrew members; loss of, or damage, to cargo; failure to deliver cargo in a timely manner, etc.
  - FAA does not explain why it did not calculate the benefits of avoiding nonfatal accidents.
- In the Regulatory Impact Analysis for the NPRM, FAA had observed that the aggregation of costs of smaller, non-flight incidents (e.g., taxiing incidents) that may be caused in part by pilot fatigue dwarfs the costs of fatal accidents. NRPRM RIA at p. 69.
  - FAA stated that:
    - Such incidents in the U.S. caused a cumulative total \$3 billion. NRPRM RIA at p. 69.
    - "[T]he data on when these accidents occur suggest they are more prevalent when the potential for fatigue is greatest." NRPRM RIA at p. 70.
    - "If even only a few percent of the losses from ground accidents are caused by pilot fatigue, the annual losses are large. Three percent would be \$90 million per year." NRPRM RIA at p. 70; and
    - "These data suggest that the scope of accidents/incidents for valuing safety needs to be expanded to account for losses due to ground events where appropriate." NRPRM RIA at p. 70.
      - Yet there is no indication that FAA attempted to calculate or consider the benefit of avoiding such incidents in cargo operations as part of its cost/benefit "analysis."
      - Failure to take into account the benefits of avoiding ground-based aircraft incidents that FAA said "need" to be considered was arbitrary and capricious.

### Specific Cost-Benefit Analysis Deficiencies

- FAA estimated that the economic loss of a fatal cargo accident "would range between \$20.35 million (loss of hull and 2 crewmembers) and \$32.55 million (loss of hull and 4 crewmembers)." Final Rule RIA p. 35. Fn. 20.
- FAA valued an averted fatality at \$6.2 million. Final Rule RIA at p. 3.

- Thus, the lost value of the aircraft hull is no more than \$8 Million. (20.35-12.4=7.95 M)
  - Yet elsewhere in the RIA, FAA asserts that it "uses \$69 million as the estimated market value of an aircraft for downtime analysis." Final Rule RIA at p. 65.
    - FAA does not explain why it uses a figure that is *one-eighth* the estimated market value to estimate the cost of *the loss of an aircraft*.
    - Note: FAA may claim that it was assuming the loss of a smaller aircraft, as it has for passenger operations (FAA states that the replacement value of a lost passenger aircraft hull is \$8.15 million; Final Rule RIA at p. 35), but there is no stated basis for assuming only the loss of a small aircraft for cargo operations.
- Applying a generic loss of life figure, established by OMB and DOT to calculate the economic loss of life for broad, general population, to a much smaller, and well-defined segment of the population—cargo pilots—is arbitrary and capricious. FAA should have used a much more refined analysis to more accurately estimate the lost flightcrew lives.
- The RIA calculates "loss of service" for aircraft that are taken out of service to be retrofitted with approved sleeping quarters. RIA at p.65.
  - However, FAA does not calculate any loss of service for an aircraft that is destroyed in an accident.
  - There must be some time period before that aircraft is replaced. [Does IPA have any information on how long it takes to obtain a replacement aircraft?]
    - Even if you total your car, there is a time period before you can coordinate with the insurance company to obtain a permanent replacement.
- In considering the loss due to a cargo aircraft accident, FAA did not give any consideration to the loss of the cargo itself.
  - Yet in the context of explaining why the proposed rule would have interfered with cargo operations and the time-critical delivery of essential goods, UPS stated that:
    - "A fully loaded B747-400 freighter may have upwards of 18,000 packages." 11/15/10 UPS Comments at p. 5.
      - In discussing costs and benefits of the proposed rule, UPS said that "[A] typical UPS Airbus A300... can carry a typical load of about 12,000 packages."11/15/UPS Comments at p. 19.

- "UPS's typical cargo often includes critically needed medical supplies and pharmaceuticals, and so timely delivery often is, quite literally, a matter of life and death." 11/15/10 UPS Comments at p. 5.
  - If the failure to deliver such critical cargo in a timely manner can mean the difference between life and death, surely the deaths that result from the destruction of that cargo in an accident must be considered in evaluating the benefits of avoiding such an accident.
- "In some markets the entire payload of a UPS aircraft may consist of highlyperishable goods whose value can be completely destroyed by a flight delay or cancellation." 11/15/10 UPS Comments at p. 5.
  - Certainly the value of such goods would be completely destroyed *if those goods were actually destroyed* in a plane crash. The value of avoiding such destruction should have been considered by FAA.
- "UPS also moves sophisticated, high-value industrial components used to operate critical infrastructure such as power stations and water treatment plants." 11/15/10 UPS Comments at p. 5.
  - Avoiding the economic consequences of such critical components not being delivered in a timely manner or at all -- should have been considered in the benefit cost analysis.
  - UPS and other express cargo companies also deliver other high-value items under just-in-time inventory systems (UPS Comments at p. 18), and the economic consequences of such cargo never reaching its destination due to an accident should also have been considered in FAA's benefit-cost analysis.

# Lack of Opportunity for Comment on a Critical Factor in FAA's Decision-Making

- The DC Circuit, where IPA filed its Petition for Review, has overturned portions of a motor carrier duty time rule issued by another DOT agency for failure "to reveal portions of the technical basis for a proposed rule in time to allow for meaningful commentary."
  - Here, FAA failed to publish its benefit cost analysis by which it determined that the costs of compliance by cargo operators with the final rule "significantly exceed the quantified societal benefits." FR at p. 332.
  - The Court has previously stated that "the most critical factual material that is used to support the agency's position on review must have been made public in the proceeding and exposed to refutation."

- Here, FAA's benefit/cost "analysis" was the agency's *only* stated basis for excluding cargo operations from the Final Rule.
- While the conclusions of the "analysis" were referenced in the Final Rule, and in the RIA that was also put in the docket upon issuance of the Final Rule, the analysis itself was not disclosed, and, the conclusions were released too late for interested parties to make any meaningful comment that could affect the Final Rule.