most likely be able to increase utilization of their pilots by 4% on average (which would amount to an additional 2 flight hours per month per pilot in most cases).

Air carriers would realize these productivity gains only to the extent that their pilot salary costs would not increase. Such an assumption appears warranted for the following reasons. The FAA estimated that about 10% of the pilot salary cost of the major air carriers is for nonproductive time (i.e., time within a duty period that is not devoted to actually flying the airplane). Air carriers frequently pay pilots for this nonproductive time at a reduced hourly rate, as established by formulas in their contracts. The proposal would allow them to significantly reduce this nonproductive time by permitting an increase in maximum flight hours from 8 to 10 hours within a shorter duty period.

Many unionized part 121 air carriers would probably have to renegotiate their contracts in order to reduce the amount of nonproductive time for which they are currently paying. Renegotiation would not be required, however, in order to add about 2 hours on average to monthly pilot flying hours because actual flying hours are currently considerably lower than the maximum range of 75–80 hours under most contracts. In addition, the nonunionized air carriers would in theory have a greater potential for increasing flight hours flown by their crewmembers because their maximum limits on flight hours tend to be closer to the current regulatory maximums of 1,000 hours per year. Under the proposal, the maximum monthly flight time of 100 hours per month would effectively allow 1,200 hours of flight time per year, thereby affording them the potential of a 20% increase in productivity (nonunionized air carriers account for 16% of the operations flown by all part 121 air carriers). This analysis, however, only assumes a 4% increase in productivity.

The FAA estimated that a 4% overall productivity enhancement would afford part 121 carriers overall total cost savings amounting to $3.07 billion (present value, $1.72 billion) over the next 15 years. These estimates are based on an expected decrease of 3,348 new pilots hired over this period and an average loaded salary of $82,572 for part 121 scheduled and $72,600 for part 121 supplemental. In addition, initial training costs of $18,516 for part 121 scheduled pilot and $17,908 for part 121 supplemental pilot were used in this analysis as in the cost analysis.

This estimate should be regarded as an lower bound for potential cost savings arising from the increase in pilot productivity. Productivity cost savings above 4% are theoretically possible; however, due to any salary increases that unions may negotiate, the air carriers may not be able to achieve all of these savings. In any event, air carriers would have a greater opportunity to limit pay for nonproductive time under the proposal, as noted above, which currently amounts to a significant part of their total salary costs. The FAA does not have sufficient information to assess the interplay of these factors in determining pilot salaries and requests comments from the public on this issue.

Longer proposed flying hours would also allow air carriers to reduce the number of 3-pilot crews in favor of 2-pilot crews. The FAA estimates an additional savings of 200 pilots, with annual net cost savings which could amount to $20.40 million in the first year and $16.54 million in subsequent years. These potential cost savings were estimated at $119.62 million (discounted) over a 15-year period. Consequently, total cost savings of the proposed rule for part 121 air carriers is expected to amount to $3.32 billion (present value, $1.87 billion) over the next 15 years.

Part 135 Scheduled Air Carriers

The proposed rule is estimated to impose discounted quantifiable costs of $56.75 million on part 135 carriers over the next 15 years, but these costs could be offset by cost savings. The total potential cost savings of the proposed rule are expected to amount to $94.04 million over the next 15 years. The net cost savings, which would result from an expected net reduction of 353 new pilots hired over the next 15 years, could therefore amount to $50.68 million over this period. This conclusion is contingent on the assumption that these operators would be able to modify their flight schedules so as to avoid expenses associated with longer minimum rest periods without significantly affecting revenues.

Costs

The FAA estimated that the reserve pilot provisions of the proposal would result in the hiring of 152 additional pilots in order to avoid having to cancel flights because of inadequate reserve pilot resources. The increased annual cost for the industry was estimated at $6.12 million. In addition, these operators are expected to incur incremental initial training costs amounting to $1.06 million in the first year the proposed rule is in effect, increasing annual compliance costs to $7.18 million in that year. These costs would amount to a discounted $56.75 million over a 15-year period.

Cost Savings

Part 135 scheduled airlines would reap potential cost savings amounting to $145.04 million (present value, $84.76 million) over the next 15 years. Although these operators currently tend to utilize their pilots more intensively than the part 121 operators (i.e., 74–89 hours), they still utilize them well under the proposed regulatory maximum of 100 hours a month. The potential for a 4% increase in productivity would still remain. The fact that a considerably smaller portion of the part 135 pilot workforce is unionized would remove that possible constraint to increased productivity.

These potential cost savings are based on a projection that these operators would need 353 fewer pilots at an average annual loaded salary of $40,280 that was used in the analysis of costs. In addition, initial training costs of $6,948 per pilot would be saved.

Benefits

The FAA has promulgated flight time limitation rules that contain rest requirements for certain operations and weekly and monthly limits on the number of hours of flight time in an effort to protect flight crewmembers from work-related fatigue. The issue did not receive much publicity until May 1994, when the NTSB cited pilot fatigue as a probable cause in an accident when the captain lost control of a DC–8 freighter while approaching the U.S. Naval Station Airbase at Guantanomo Bay, Cuba in August 18, 1993. Prior to that time, this factor had never been cited by the NTSB as a probable cause in an accident involving part 135 or 121 operations.

In its investigation, the NTSB noted that the flight crew had been on duty about 18 hours and had flown about 9 hours at the time of the accident. Under the proposed rule, this flight would have been illegal because the maximum length of a duty period for a 3-person flight crew on an airplane lacking appropriate sleeping quarters is 16 hours. In addition, the company had intended to further extend this flight by having the crew ferry the airplane back to Atlanta after the plane had landed at Guantanamo Bay, which would have resulted in a total duty time of 24 hours. The NTSB report specifically noted that the flight crewmembers had experienced a disruption of circadian rhythms and sleep loss, which resulted in fatigue that had adversely affected