published in the Federal Register (47 FR 32825, July 29, 1982) an invitation for public comment on proposed definitions of small entities. At the time, the FAA also provided to the SBA materials on the proposed alternative definitions.

Costs

Part 121 Equivalent Training for Part 135 Crewmembers

The rule requires 121 training and qualification standards for part 135 crewmembers engaged in operations using airplanes certificated for two pilots or having 10 or more passenger seats. Newly hired part 135 pilots and flight attendants will be required to receive the initial part 121 training. Existing part 135 pilots and flight attendants will not need to repeat initial training but will be subject to recurrent training requirements. During their first recurrent training session, however, existing employees must meet the newly required part 121 training and qualifying standards.

Incremental training costs were determined as the difference between current and projected training costs. For example, the incremental cost of initial training was estimated to be $3,999 for a PIC and was determined by adding pilot compensation, travel and per diem, and other costs and subtracting current costs.

Initial training costs for PICs, SICs, and flight attendants will increase by about $230,000 per year. The cost for first year recurrent training for flight crewmembers will increase by $1.3 million because each currently employed crewmember will be required to meet the part 121 training and qualification standards. The cost for recurrent training after the first year will increase by $1.75 million.

The discounted incremental cost to part 135 operators over the ten year period is estimated to be about $17 million.

Part 121 CRM Training

The number of PICs, SICs, and flight engineers undergoing training during the two-year phase-in period equals 65 percent of the existing number of employees plus new hires (the FAA estimates that 35 percent of pilots are already receiving CRM training through the AQP). The cost for the initial two-year phase-in training will be approximately $7.5 million each year. The cost for initial CRM training after the phase-in period (which applies to new hires only) will be approximately $2 million. Recurrent training costs for existing employees will be about $17 million annually.

The number of flight attendants and dispatchers undergoing training during the three-year phase-in period equals the existing number of employees plus new hires. For flight attendants and dispatchers, initial training over the three-year phase-in period will cost about $4 million annually. Initial training after the third year for new hires will amount to approximately $3.5 million annually. Recurrent training for existing employees will cost about $6 million each year.

Over the ten-year period, the total discounted cost will equal about $230 million.

Part 135 CRM Training

CRM awareness training for pilots for the two-year phase-in period will cost approximately $300,000 per year. After the second year, initial training costs will equal about $67,000 each year. Annual recurrent training costs will be about $600,000.

Initial CRM awareness training for flight attendants will cost about $31,000 per year. The cost for initial training conducted after the phase-in period will equal about $12,000 annually. The annual cost for recurrent training will be about $23,000. Over the ten year period, discounted CRM training costs for the part 135 operators will equal about $6 million.

Total Cost

The total discounted cost of the rule will be approximately $253 million over the next 10 years. The cost of CRM training for part 121 operators accounts for the largest portion.

Benefits

Part 135 Training Upgrade

From 1984 through 1993, the NTSB concluded that pilot error was a probable cause of 30 accidents involving part 135 aircraft affected by this rule. (The accidents included in this analysis involved at least a serious injury or substantial airplane damage). Mid-air collisions and accidents due to bad weather are excluded because the training that will be required under this rule would not reduce those types of accidents.

The 30 accidents were responsible for 89 fatalities and 40 serious injuries. During this period, commuter operators flew 25.5 million flights resulting in a commuter accident due to pilot error of 1.1775 accidents per million commuter flights. The average value of avoiding such an accident is estimated to be $9.607 million.

In estimating the maximum potential value of the benefits, the FAA assumes that: (1) Because part 135 operators will not complete training for two years, no expected benefits will result after the first year and, at most, only one-half of the potential benefits will be achieved in the second year (full benefits will be achieved in the remaining years); and (2) the rule will not eliminate all pilot error accidents but will, at best, only reduce the part 135 pilot-error accident rate down to the rate sustained by part 121 operators. However, the FAA does not expect this rule to completely eliminate the differential in the pilot-error accident rate because the higher part 135 accident rate could be caused by factors other than pilot training; less pilot experience might also result in a higher pilot-error accident rate for part 135 operations.

The FAA estimated the value of potential benefits by multiplying the average value of a part 135 pilot-error related accident ($9.607 million) by the number of potential accidents (accident rate times projected flights). The value of potential benefits was then adjusted to equal the part 121 pilot-error accident rate. The pilot-error accident rate for part 121 airplanes was determined by conducting a search of the part 121 accident database. The FAA determined that this database contained 38 accidents in which pilot error was the probable cause. Given that part 121 airplanes flew 61.55 million flights during this period, the pilot-error accident rate is estimated to be 0.6174 accidents per million flights. By subtracting the part 121 accident rate from the part 135 accident rate [(1.1775 − 0.6174)=.5601], the available reduction in the part 135 accident rate is estimated to equal .56 accidents per one million flights.

Over the ten-year period, the estimated value of the benefits of this provision is about $196 million. When current practice is taken into consideration (30 percent of relevant pilots are already trained under part 121 under an RAA exemption), the ten-year, benefit of this provision is estimated to be $111 million.

Part 135 Crew Resource Management Training

During the period 1984 through 1993, crew coordination was a probable cause in 9 accidents involving part 135 aircraft affected by this rule. The 9 accidents were responsible for 45 fatalities and 7 serious injuries. During this period, commuter operators flew 25.5 million flights resulting in a commuter accident rate due to crew coordination problems of 0.3529 accidents per million