

Summary of changes that the FAA made to the ETOPS NPRM at the recommendation of OMB

OMB requested the FAA to add the following 7 tables:

	Current requirements		Proposed Rule		
	Up to 60 minutes	Beyond 60 minutes	Up to 60 minutes	Beyond 60 min up to 180 minutes	Beyond 180 minutes
Part 121 two engine	Section 121.161 applies	Advisory material and policy letters	No change	Would apply (Would codify previous practice)	Would apply
Part 121 more than two engine	No current regulation	No current regulation	No change	No change	Would apply
Part 135	No current regulation	No current regulation	No change	No change	Would apply

Proposed ETOPS requirement	Under current advisory circulars and policy			Under the proposed regulation		
	Twins	More than two engines	Part 135 operations	Twins	More than two engines	Part 135 operations
Applicability	More than 60 minutes from an adequate airport	Does not apply to turbine engine airplanes.	Does not apply	More than 60 minutes from an adequate airport	More than 180 minutes from an adequate airport	More than 180 minutes from an adequate airport
Terminology	ETOPS (Extended Operations for Two Engine Airplanes)	ETOPS does not currently apply to turbine engine airplanes with more than two engines	ETOPS does not currently apply to part 135 operations	ETOPS (Extended Operations)	ETOPS (Extended Operations)	ETOPS (Extended Operations)
Maximum permissible distance from an adequate airport	207 minutes	Not regulated	180 minutes	240 minutes with certificate holder approval, beyond 240 minutes with route specific approval	To maximum system limitation	240 minutes
Cargo fire suppression	Diversion limit plus 15 minutes	Not required	Not required	Diversion limit plus 15 minutes.	Diversion limit plus 15 minutes (6 year compliance period)	Not required
Rescue and fire fighting service capability	ICAO category 4	Not required	Not required	ICAO category 4 up to 180 min, ICAO category 7 beyond 180 min	ICAO category 7	Not required
Passenger recovery plan	Required for polar operations	Required for polar operations	Required for polar operations	Required	Required	Required
Engine reliability standards	IFSD rates: 0.02/1000 hrs for 180 min, 0.19/1000 hrs for 207 min	None	None	IFSD rates: 0.05/1000 hrs for 120 min, 0.02/1000 hrs for 180 min, 0.01/1000 hrs for > 180 min	IFSD rates: 0.2/1000 hrs for 3 engine airplanes, 0.1/1000 hrs for 4 engine airplanes	Not specified
Areas of designated ETOPS applicability	Polar	Polar	Polar	Applies	Applies	Applies
Time-limited systems	Per type design approval limit for the airplane (up to 207 min).	No requirement	No requirement	Specified in part 25, Appendix L	Specified in part 25, Appendix L	Specified in part 25, Appendix L
Dispatch weather requirements for alternate	Applies	No requirement	No requirement	Applies	Applies	Applies
ETOPS maintenance program	Required	No requirement	No requirement	Required	Required	Required
Communication capabilities	SATCOM required for 207 min ETOPS	No requirement	No requirement	Additional com required. SATCOM beyond 180 min..	Additional com required. SATCOM beyond 180 min..	Additional com required. SATCOM beyond 180 min..

The net cost savings to individual operators are summarized in Table 1.

Table 1-Net Ten-Year Cost Savings to Individual New ETOPS Operators

	New 2-Engine Operator	3 or 4-Engine Operator	Part 135 Operator
Total Cost savings	\$10,395,000	\$19,650,000	\$9,600,000
Total Cost	\$ 106,500	\$ 3,676,100	\$1,030,400
Net Cost Savings	\$10,288,500	\$15,973,900	\$8,569,600
Present Cost savings	\$7,300,400	\$13,800,200	\$6,742,100
Present Cost	\$ 75,900	\$ 2,789,200	\$ 741,100
Net Present Cost Savings	\$7,224,500	\$11,011,000	\$6,001,000

Table 2 Ten-Year Cost Savings to Operators

Cost-savings to:		Cost Savings	Present Value
3 Existing 2-engine Operators		\$31,185,000	\$21,901,225
7 New 2-engine Operators		\$72,054,500	\$50,596,140
13 3-or 4-engine Operators		\$207,660,700	\$143,142,935
81 Part 135 Operators		\$777,600,000	\$546,108,480
Total Cost Savings		\$1,089,210,700	\$762,255,500

The net cost-savings to the industry are reduced by the costs incurred by the operators and manufacturers. These costs are addressed in the Cost section. These costs are estimated to be less than the estimated savings and the net cost-savings to the industry are estimated at \$823.9 million or \$530.2 million, discounted as shown in Table 3.

Table 3 Ten-Year Net Cost-Savings or Costs to Industry

Category	Cost Savings or Cost	Present Value
Existing 2-engine Operators	\$20,449,500	\$14,341,826
7 New 2-engine Operators	\$72,019,500	\$50,571,560

13 3-or4-engine Operators	\$159,866,200	\$106,879,435
81 Part 135 Operators	\$694,137,600	\$486,079,380
Reporting and Certification Costs for		
3 models of 3 or 4 engine airplanes	(\$11,875,500)	(\$9,797,100)
5 Business Aircraft Manufacturers	(\$36,065,000)	(\$33,720,900)
Part 25 costs		
5 Business Aircraft Manufacturers		
Part 33 Costs	(\$50,625,000)	(\$47,337,500)
Current Part 135 Operators		
Aircraft Replacement Costs	(\$24,000,000)	(\$22,440,000)
Total Net Cost Savings	\$823,907,300	\$530,234,875

The quantified costs to all the individual entities affected by the proposed rule are summarized in Table 4. The FAA requests comments and data addressing these estimates.

Table 4- Estimated Ten Year Quantified Costs of Proposed Rule to Individual Entities

Cost Area	Total Cost	Present Value
Cost to a New Part 121 Twin-Engine ETOPS Operator	\$ 106,500	\$ 75,900
Cost to a 3 or 4-Engine Operator	\$ 3,676,500	\$2,789,500
Cost to a Part 135 Operator	\$ 1,030,400	\$ 741,100
Costs to a Business Aircraft Manufacturer for Reporting and Investigation, and Certification of Airframe and ETOPS-Eligible Engine	\$ 20,560,000	\$18,474,500
Reporting and Certification Costs to Manufacturer of 3-4engine airplane	\$3,958,500	\$3,265,700

Table 5 Estimated Ten-Year Costs to Industry

Costs Incurred by:		Total Cost	Present Value
Existing 2-engine Operators		\$10,735,500	7,559,400
7 New 2-engine Operators		\$745,500	\$531,300
13 3-or4-engine Operators		\$47,794,500	\$36,263,500
81 Part 135 Operators		\$83,462,400	\$60,029,100
Reporting and Certification Costs for			
3 makes of 3 or 4 engine airplanes		\$11,875,500	\$9,797,100
5 Business Aircraft Manufacturers		\$36,065,000	\$33,720,900
Part 25 costs			
5 Business Aircraft Manufacturers			
Part 33 Costs		\$50,625,000	\$47,337,500
Current Part 135 Operators			
Aircraft Replacement Costs		\$24,000,000	\$22,440,000
Total Costs		\$265,303,400	\$217,678,800