Federal Aviation Administration, DOT § 121.646

§ 121.646 En-route fuel supply: flag and supplemental operations.

(a) No person may dispatch or release for flight a turbine-engine powered airplane with more than two engines for a flight more than 90 minutes (with all engines operating at cruise power) from an Adequate Airport unless the following fuel supply requirements are met:

(1) The airplane has enough fuel to meet the requirements of §121.645(b);

(2) The airplane has enough fuel to fly to the Adequate Airport—

(i) Assuming a rapid decompression at the most critical point;

(ii) Assuming a descent to a safe altitude in compliance with the oxygen supply requirements of §121.333; and

(iii) Considering expected wind and other weather conditions.

(3) The airplane has enough fuel to hold for 15 minutes at 1500 feet above field elevation and conduct a normal approach and landing.

(b) No person may dispatch or release for flight an ETOPS flight unless, considering wind and other weather conditions expected, it has the fuel otherwise required by this part and enough fuel to satisfy each of the following requirements:

(1) Fuel to fly to an ETOPS Alternate Airport.

(i) Fuel to account for rapid decompression and engine failure. The airplane must carry the greater of the following amounts of fuel:

(A) Fuel sufficient to fly to an ETOPS Alternate Airport assuming a rapid decompression at the most critical point followed by descent to a safe altitude in compliance with the oxygen supply requirements of §121.333 of this chapter;

(B) Fuel sufficient to fly to an ETOPS Alternate Airport (at the one-engine-inoperative cruise speed) assuming a rapid decompression and a simultaneous engine failure at the most critical point followed by descent to the one engine inoperative cruise altitude.

(ii) Fuel to account for errors in wind forecasting. In calculating the amount of fuel required by paragraph (b)(1)(i) of this section, the certificate holder must increase the actual forecast wind speed by 5% (resulting in an increase in headwind or a decrease in tailwind) to account for any potential errors in wind forecasting. If a certificate holder is not using the actual forecast wind based on a wind model accepted by the FAA, the airplane must carry additional fuel equal to 5% of the fuel required for paragraph (b)(1)(i) of this section, as reserve fuel to allow for errors in wind data.

(iii) Fuel to account for icing. In calculating the amount of fuel required by paragraph (b)(1)(i) of this section (after completing the wind calculation in paragraph (b)(1)(ii) of this section), the certificate holder must ensure that the
§ 121.647 Factors for computing fuel required.

Each person computing fuel required for the purposes of this subpart shall consider the following:

(a) Wind and other weather conditions forecast.

(b) Anticipated traffic delays.

(c) One instrument approach and possible missed approach at destination.

(d) Any other conditions that may delay landing of the aircraft.

For the purposes of this section, required fuel is in addition to unusable fuel.

§ 121.649 Takeoff and landing weather minimums: VFR: Domestic operations.

(a) Except as provided in paragraph (b) of this section, regardless of any clearance from ATC, no pilot may takeoff or land an airplane under VFR when the reported ceiling or visibility is less than the following:

(1) For day operations—1,000-foot ceiling and one-mile visibility.

(2) For night operations—1,000-foot ceiling and two-mile visibility.

(b) Where a local surface restriction to visibility exists (e.g., smoke, dust, blowing snow or sand) the visibility for day and night operations may be reduced to ½ mile, if all turns after takeoff and prior to landing, and all flight beyond one mile from the airport boundary can be accomplished above or outside the area of local surface visibility restriction.

(c) The weather minimums in this section do not apply to the VFR operation of fixed-wing aircraft at any of the locations where the special weather minimums of §91.157 of this chapter are not applicable (See part 91, appendix D, section 3 of this chapter). The basic VFR weather minimums of §91.155 of this chapter apply at those locations.

§ 121.651 Takeoff and landing weather minimums: IFR: All certificate holders.

(a) Notwithstanding any clearance from ATC, no pilot may begin a takeoff in an airplane under IFR when the weather conditions reported by the U.S. National Weather Service, a source approved by that Service, or a source approved by the Administrator, are less than those specified in—

(1) The certificate holder’s operations specifications; or

(2) Parts 91 and 97 of this chapter, if the certificate holder’s operations specifications do not specify takeoff minimums for the airport.

(b) Except as provided in paragraph (d) of this section, no pilot may continue an approach past the final approach fix, or where a final approach fix is not used, begin the final approach