



IBERIA
EXPRESS



Implementation of Part-CAT – Aeroplanes
Case study: CAT.OP.MPA.150 Fuel Policy

The Company | **An efficient airline**

Iberia Express is a **Madrid**-based airline operating short and medium-haul flights. Since it first began operating in **March 2012**, the airline has become one of the top four airlines to fly out of the Madrid Barajas airport, with over 6 million passengers and 50,000 flights in its first two years. According to the FlightStats study published in December 2013, Iberia Express tops all other European airlines in terms of **punctuality**.

The airline company – one hundred percent owned by Iberia – competes in an ever complicated market in an **efficient and sustainable** manner. Iberia Express provides its parent company with connections and direct transit and, as such, supports Iberia's long-haul growth.

Since its inaugural flight, Iberia Express has operated 31 routes in Spain and Europe, flying 17 Airbus A320 aircraft.



Fuel | **Overview**

Fuel **costs** represent between 30% and 40% of an airline total cost; and this is true at Iberia Express as well. Therefore, even small fuel **savings** have a major impact on financial performance.

EVERY KILO COUNTS

An airline able to develop an **efficient fuel** management policy can reduce its fuel costs significantly.

Fuel efficiency in flight operations is a central factor for our **success**, so on 2.013, Iberia Express set up its **Fuel Efficiency and Emissions Office**. Employees from different company departments work **together** to identify savings opportunities and develop and implement measures to reduce fuel consumption.

A SUCCESSFUL FUEL EFFICIENCY PROGRAM IS A TEAM EFFORT



Fuel | **1. Identification**



In the past, in flight fuel use was less predictable, and assistance from dispatch services to update pre-flight planning assumptions was non-existent. As a result, it is a possibility that excess fuel is been carried on board our aeroplanes.

Today, operational experience, new technologies and advanced aeroplane capabilities (computerized flight planning and flight management systems) bring increased accuracy and predictability to operational and fuel planning.

Fuel | The Process

PROCESS OF DEVELOPING AND IMPLEMENTING OPERATIONAL CHANGES

1. Operator **identifies** operation to which operational variation would apply.
2. Operator **gathers** and **analyses** available information and data.
3. Operator conducts a **safety risk assessment** of the operational variation.
4. Operator selects and implements safety risk **controls** and **mitigation** measures that ensure no substantial increase in safety risk to the operation.
5. Operator **monitors** effectiveness of controls and mitigations and **adjust** as necessary.

Fuel | 1. Identification

Iberia Express has been focusing on numerous ways to reduce fuel consumption. As an example, we identified potential savings on the following areas:

- ➡ Flight Operations,
- ➡ Reduction of Aircraft Weight,
- ➡ Flight Planning,
- ➡ **REDUCTION IN FUEL LOADING,**
- ➡ APU usage, Maintenance,
- ➡ And Others.

If the amount of fuel carried on any given flight can be reduced, through **compliance with regulations** while maintaining target levels of **safety performance**, the savings will be directly translated to reduced fuel burn. Reduced fuel burn equates directly to **lower operating costs** and **lower emissions**.



We want to carry the **appropriate amount of fuel** to meet all **regulatory requirements** and to ensure a **safe flight**. In order to ensure safety as an outcome of an operational activity, we rely on the structured application of safety risk management principles.

Reduction in Fuel Loading | 2. Information. Regulations.

ACTUAL

COMMISSION REGULATION (EC) No 859/2008

of 20 August 2008

amending Council Regulation (EEC) No 3922/91 as regards common technical requirements and administrative procedures applicable to commercial transportation by aeroplane

OPS 1.255 Fuel Policy &

Appendix 1 and Appendix 2 to OPS 1.255

IBERIA EXPRESS

MANUAL DE OPERACIONES
OPERATIONS MANUAL

PARTE A:
GENERAL / BÁSICO

IBERIA EXPRESS	MANUAL DE OPERACIONES	Sección 8.1.7
	OPERATIONS MANUAL	
	PARTE A: GENERAL / BÁSICO	Página 89 de 114
	Revisión para la impresión del texto	Rev. 00

Contingency fuel

Contingency fuel is carried to compensate for such deviations as from:

- an individual aeroplane from the expected fuel consumption data;
- forecast meteorological conditions; and
- planned routings and/or cruising levels.

Contingency fuel which shall be the higher of a or b, below:

a) Either:

- 5 % of the planned trip fuel or, in the event of in-flight replanning, 5 % of the trip fuel for the remainder of the flight; or
- Not less than 3 % of the planned trip fuel or, in the event of in-flight replanning, 3 % of the trip fuel for the remainder of the flight, provided that an en-route alternate aerodrome is available; or

b) An amount to fly for five minutes at holding speed at 1 000 ft (450 m), above the destination aerodrome in standard conditions.

Combustible para contingencias

El combustible para contingencias se lleva para compensar elementos tales como:

- las desviaciones de los datos de consumo de combustible previstos para una aeronave determinada;
- las desviaciones de las condiciones meteorológicas pronosticadas; y
- las desviaciones en rutas y/o niveles de crucero planificados.

El combustible para contingencias será el más elevado de los valores indicados en a) o b):

a) Bien:

- el 5% del combustible previsto para el trayecto o, en caso de replanificación en vuelo, el 5 % del combustible, para el trayecto que resta del vuelo; o
- una reserva de combustible no inferior al 3 % del combustible para el trayecto previsto o, en caso de replanificación en vuelo, no inferior al 3 % del combustible necesario para el resto del vuelo, a condición de que haya disponible un aeródromo alternativo en ruta; o

b) una cantidad para volar durante 5 minutos a velocidad de espera a 1 000 pies (450 m) sobre el aeródromo de destino en condiciones normales.

FUTURE

COMMISSION REGULATION (EU) No 965/2012

of 5 October 2012

laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

CAT.OP.MPA.150 Fuel Policy

AMC1 CAT.OP.MPA.150(b) Fuel Policy

AMC2 CAT.OP.MPA.150(b) Fuel Policy

GM1 CAT.OP.MPA.150(c)(3)(i) Fuel Policy

Article 10

Entry into force

1. This Regulation shall enter into force on the third day following that of its publication in the *Official Journal of the European Union*.

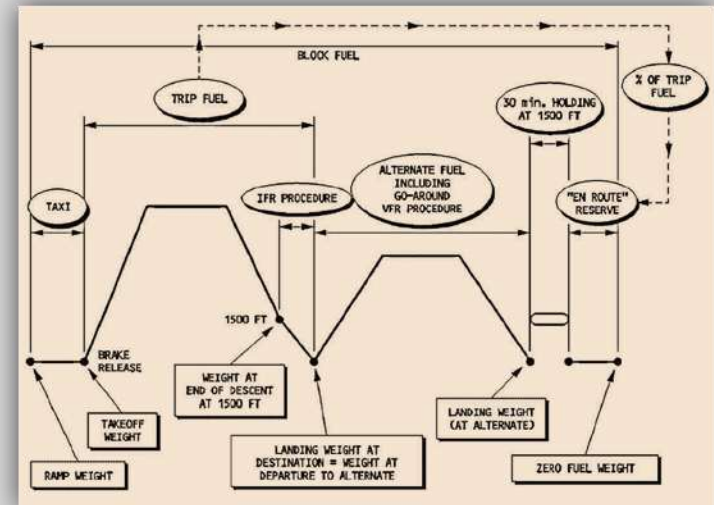
It shall apply from **28 October 2012**.

2. By way of derogation from the second subparagraph of paragraph 1, Member States may decide not to apply the provisions of Annexes I to V until **28 October 2014**.

OM A, 8.1.7. Determination of the Quantities of Fuel And Oil (Fuel Policy)

Reduction in Fuel Loading | **2. Information. CAT.OP.MPA.150 Fuel policy**

- (a) The operator shall establish a fuel policy for the purpose of flight planning and in-flight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation. **The fuel policy and any change to it require prior approval by the competent authority.**
- (b) ...
- (c) The operator shall ensure that the pre-flight calculation of usable fuel required for a flight includes:
- (1) taxi fuel;
 - (2) trip fuel;
 - (3) reserve fuel consisting of:
 - i. **CONTINGENCY FUEL;**
 - ii. alternate fuel, if a destination alternate aerodrome is required;
 - iii. final reserve fuel; and
 - iv. additional fuel, if required by the type of operation; and
 - (4) extra fuel if required by the commander.
- (d) ...



Reduction in Fuel Loading | **3. Information. Definitions.**

► ANNEX 1 Definitions for terms used in Annexes II to V

‘Contingency fuel’ means the fuel required to compensate for **unforeseen factors** that could have an influence on the fuel consumption to the destination aerodrome.

‘Fuel ERA aerodrome’ means an ERA aerodrome selected for the purpose of **reducing** contingency fuel.

► GM1 CAT.OP.MPA.150(c)(3)(i) Fuel policy

CONTINGENCY FUEL

Factors that may influence fuel required on a particular flight in an unpredictable way include deviations of an individual aeroplane from the expected fuel consumption data, deviations from forecast meteorological conditions and deviations from planned routings and/or cruising levels/altitudes.

► AMC2 CAT.OP.MPA.150(b) Fuel policy

LOCATION OF THE FUEL EN-ROUTE ALTERNATE (FUEL ERA) AERODROME

Reduction in Fuel Loading| 2. Information. AMC1 CAT.OP.MPA.150(b) Fuel Policy.

PLANNING CRITERIA – AEROPLANES

The operator should base the defined fuel policy, including calculation of the amount of fuel to be on board for departure, on the following planning criteria*:

(a) Basic procedure

(3) Contingency fuel, except as provided for in (b), which **should be the higher of:**

(i) Either:

- A. **5 % of the planned trip fuel** or, in the event of in-flight replanning, 5 % of the trip fuel for the remainder of the flight;
- B. **not less than 3 % of the planned trip fuel** or, in the event of in-flight replanning, 3 % of the trip fuel for the remainder of the flight, provided that an **en-route alternate (ERA) aerodrome is available**;
- C. an amount of fuel sufficient for 20 minutes flying time based upon the planned trip fuel consumption, provided that the operator has established a **fuel consumption monitoring programme for individual aeroplanes** and uses valid data determined by means of such a programme for fuel calculation; or
- D. an amount of **fuel based on a statistical method** that ensures an appropriate statistical coverage of the deviation from the planned to the actual trip fuel. This method is used to monitor the fuel consumption on each city pair/aeroplane combination and the operator uses this data for a statistical analysis to calculate contingency fuel for that city pair/aeroplane combination;

(ii) or an amount to **fly for 5 minutes at holding speed at 1.500 ft** (450 m), above the destination aerodrome in standard conditions.

* NO Reduced Contingency Fuel (RCF) Procedure or Predetermined Point (PDP) Procedure

Reduction in Fuel Loading | 2. Data Analysis

FLT OPS

Is the new procedure in the Operations Manual or we need approval from the authorities?

ON MANUAL

OCC

Is our flight dispatch tool flexible enough to work with new procedure?

YES

Do we have ERA airports available for all our destinations?

YES

Do we need to fly longer routes to have an ERA airport available?

NO

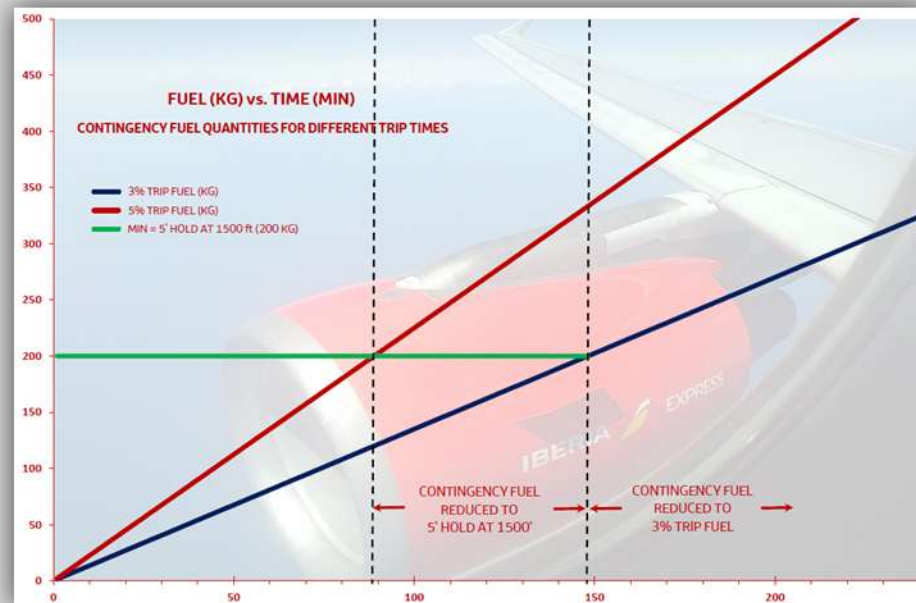
TECH OFFICE

How many flight will benefit?

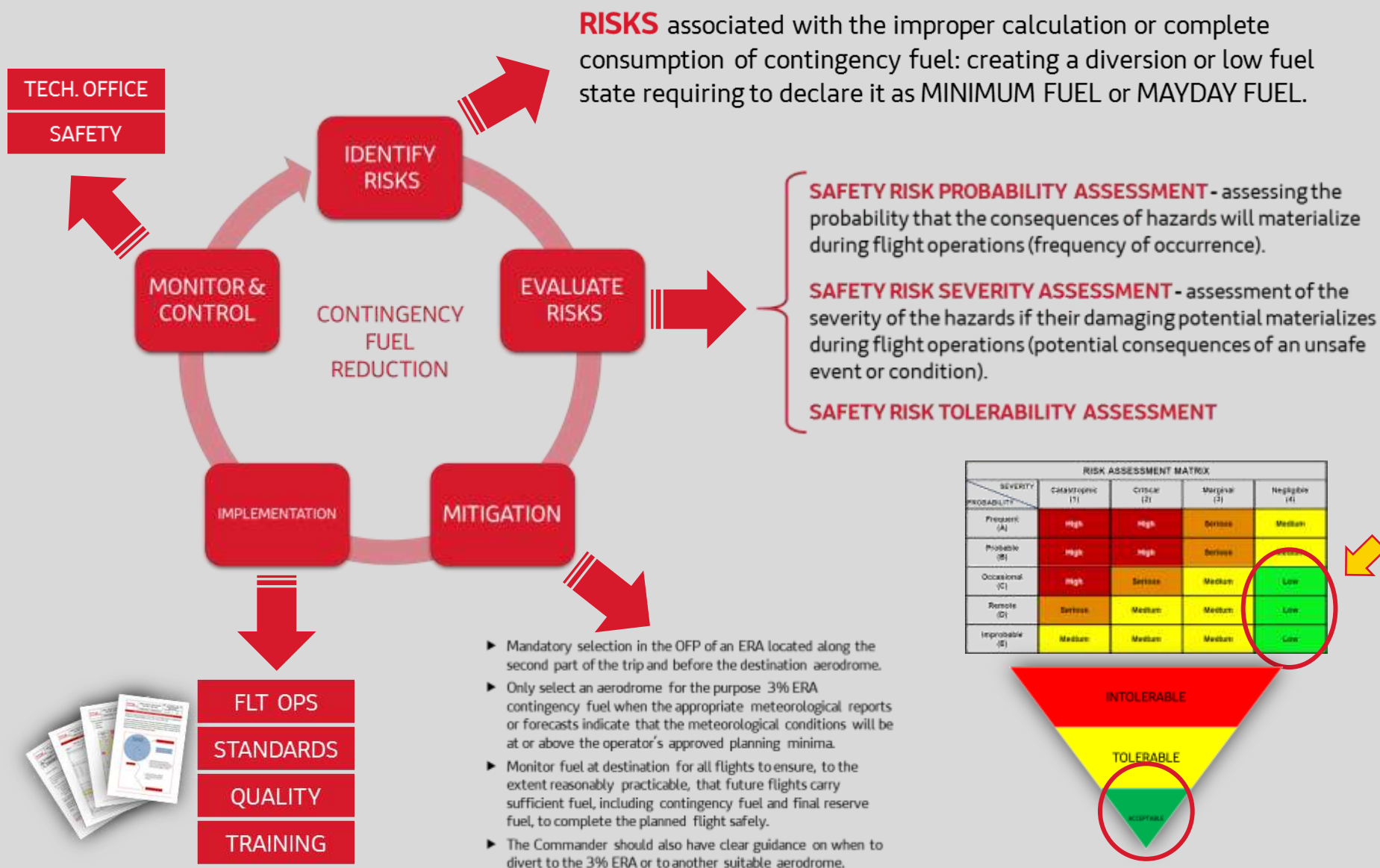
>50%

What will be the savings?

€€€€



Reduction in Fuel Loading | 3/4/5. Risk Assessment



Conclusion

- ▶ Our policy for contingency fuel planning for all flight is based on 3% ERA CAT.OP.MPA.150 (b); AMC1 CAT.OP.MPA.150(b).
-
- ▶ In a rapidly changing economy, the air transport industry must continuously **adapt** to new trends and increasingly competitive market conditions.
 - ▶ Civil aviation authorities must define the regulations that allow operators to optimize their flight operations while maintaining safety levels.
 - ▶ A realistic approach to flight operations that would take into account operational experience, new technologies and advanced aeroplane capabilities while providing for safe operations is needed.
 - ▶ Civil aviation authorities and operators must **work in cooperation** to develop policies to take full advantage of available operational and system capabilities.



THANK YOU FOR YOUR ATTENTION

**QUESTIONS at the end of the session
after Outlook to regulatory developments**

