



ICAO Fuel Savings Estimation Tool

Exercise

ICAO FUEL SAVINGS ESTIMATION TOOL (IFSET) WORKSHOP

Exercise

Working group activity

- Participants will work in groups of 2.
- One facilitator will be appointed, who will present the results as a draft report in electronic form (ppt) to the plenary

Objective of the exercise

- To obtain the benefits in terms of fuels savings or CO₂ emissions from operational improvements.

Time allocated

- 2 hours

Your task

- On the basis of a defined operation and a proposed operational improvement:
 - Populate the IFSET with the correct data
 - Generate the fuel savings report
 - Verify the graphics
 - Propose a report to ICAO (2 pages recommended)

Operations 1

Airport AAAA (ADEL 1000FT) is known by the restrictions to departures due to conflicting routes that impose restrictions to a continuous climb operation.

At this airport, B737-800 is the dominant aircraft type with 400 **operations** daily, but E-195 also operates at a rate of 50 daily operations. CL60 operates at 30 movements daily and C560 at a rate of 20 movements a day. The other operations of small aircraft are not representative. All aircraft will benefit of the new departure procedure.

The only SID in use is described as: From 1000FT, climb to 7000FT and maintain this altitude for 5NM. After that climb to 14000FT and maintain this altitude for 5 more miles, when the climb is unrestricted to the cruising flight level.

The new envisaged procedure will allow the aircraft to climb from 1000FT to the cruising flight level without restrictions.

Operations 2

Airport BBBB (ADEL 3000FT) is known by the restrictions to approaches due to obstacles that impose restrictions to a continuous descend operation.

At this airport, B767 is the dominant aircraft type with 100 **operations** daily, but A340 also operates at a rate of 40 daily operations. A380 and A330 operate at 10 movements daily each. The rest of the operations are composed by B737-800 at a rate of 80 movements a day. The other operations of small aircraft are not representative. All aircraft will benefit of the new approach procedure.

To feed the runway dedicated to approach the single approach procedure is described as: **After levelling for 10NM**, descend from 10000FT to 7000FT, level for 5NM then descend from 7000FT to 3000FT.

The new envisaged procedure will allow the aircraft to descend continuously from 10000FT to 3000FT after the 15NM levelling at 10000FT.

Operations 3

The conventional route linking cities A and B has 338NM of extension. After restructuring the airspace through the implementation of RNAV routes between the two cities, the new route will be reduced to 288NM.

At this route, B737-800 at a rate of 80 operations daily is the dominant aircraft, but E-195 also operates at a rate of 70 daily operations, B767 has 60 operations daily, A340 also operates at a rate of 30 daily operations. A330 operates at a rate of 20 daily movements. Small business jets, of different types respond for 15 operations on a daily basis and only 10 are RNAV approved. The other operations are not representative.

Except for the regional jets, which have as optimum flight level 31000FT, the other aircraft types all compete for FL350.
