



สำนักงานการบินพลเรือนแห่งประเทศไทย
The Civil Aviation Authority of Thailand

AVIATION EMISSIONS REPORT REPORTING YEAR : 2021

Data Acquired and Processed by CAAT's Aviation Emissions Data Management System (CAAT-EDMS)

Contribution of 9 Aeroplane operators

TOTAL SERVICE		
FUEL	FUEL CONSUMPTION (Ton)	550,134.65
	FUEL CONSUMPTION (M.LITRE)*	687,668.31
TRAFFIC	ATK (Thousand)	3,507,893.70
	RTK (Thousand)	1,675,448.15
EFFICIENCY	Fuel Consumption/ATK (Kg/ATK)	0.1568
	Fuel Consumption/RTK (Kg/RTK)	0.3284
EMISSIONS	CO ₂ Emissions (Ton CO ₂)*	1,738,425.49
	CO ₂ Emissions per ATK (KgCO ₂ /ATK)	0.4956
	CO ₂ Emissions per RTK (KgCO ₂ /RTK)	1.0376

INTERNATIONAL AVIATION		
FUEL	FUEL CONSUMPTION (Ton)	320,825.41
	FUEL CONSUMPTION (M.LITRE)*	401,031.76
TRAFFIC	ATK (Thousand)	2,462,016.23
	RTK (Thousand)	1,075,956.59
EFFICIENCY	Fuel Consumption/ATK (Kg/ATK)	0.1303
	Fuel Consumption/RTK (Kg/RTK)	0.2982
EMISSIONS	CO ₂ Emissions (Ton CO ₂)*	1,013,808.30
	CO ₂ Emissions per ATK (KgCO ₂ /ATK)	0.4118
	CO ₂ Emissions per RTK (KgCO ₂ /RTK)	0.9422

* Note: Density = 0.8 kg/L (ref: ICAO)

Emissions calculated by ICAO's methods where emission factor is 3.16 Ton CO₂ per Fuel (ton)

DOMESTIC AVIATION		
FUEL	FUEL CONSUMPTION (Ton)	229,309.24
	FUEL CONSUMPTION (M.LITRE)**	292,859.82
TRAFFIC	ATK (Thousand)	1,045,877.47
	RTK (Thousand)	599,491.55
EFFICIENCY	Fuel Consumption/ATK (Kg/ATK)	0.2193
	Fuel Consumption/RTK (Kg/RTK)	0.3825
EMISSIONS	CO ₂ Emissions (Ton CO ₂)**	***
	CO ₂ Emissions per ATK (KgCO ₂ /ATK)	***
	CO ₂ Emissions per RTK (KgCO ₂ /RTK)	***

** Note: Density = 0.783 kg/L

Emissions calculated by IPCC 's method where;

Density = 783 kg/m³ (IPCC special Report on Aviation and Global Atmosphere)

NCV = 34.53 MJ/Litre (Thailand's Energy Conservation Report, DEDE)

Emission Factor = 71,500 kg CO₂/TJ

(Default CO₂ Emission Factor for Combustion of Jet Kerosene from 2006 IPCC Guideline for National Greenhouse Gas Inventories)

*** The result will be evaluated by ONEP as per Thailand's National Greenhouse Gases Inventory Process