

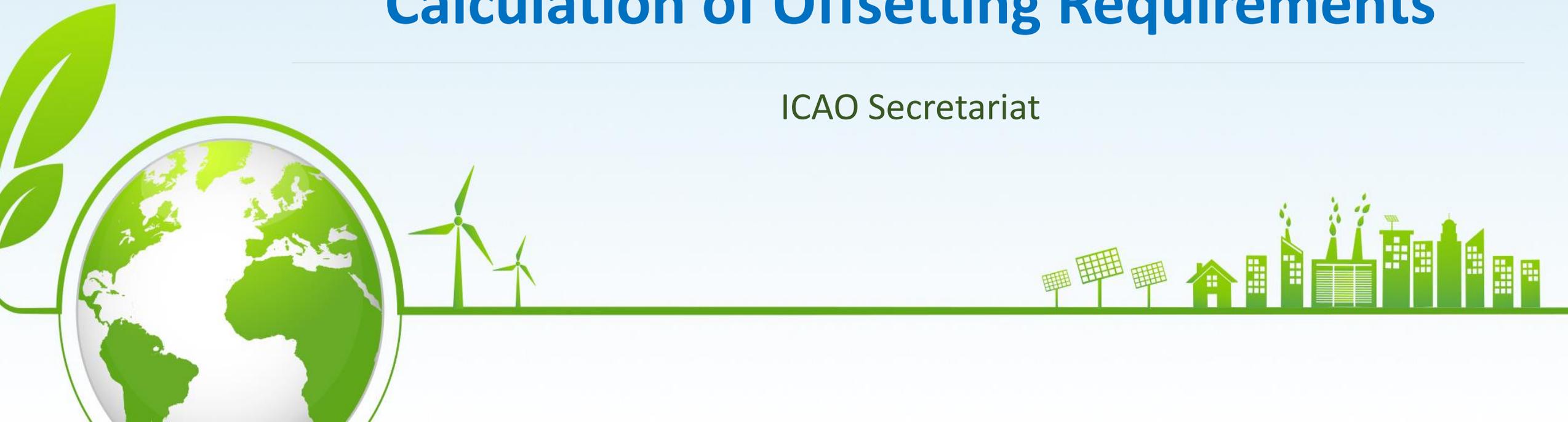


Carbon Offsetting and Reduction
Scheme for International Aviation

ICAO CORSIA Forum – Session 2

Status of CO₂ Data Reporting in CCR, and Calculation of Offsetting Requirements

ICAO Secretariat



CCR Reporting Areas



List of attributed aeroplane operators



List of accredited verification bodies



CO₂ emissions



CORSIA eligible fuels



Cancelled emissions units

Timing of Reporting

Information type	Baseline		Pilot Phase			First Phase		
	2019	2020	2021	2022	2023	2024	2025	2026
Aeroplane Operators	✓	✓	✓	✓	✓	✓	✓	✓
Verification Bodies	✓	✓	✓	✓	✓	✓	✓	✓
CO ₂ Emissions		✓ <i>2019 data</i>	✓ <i>2020 data</i>	✓ <i>2021 data</i>	✓ <i>2022 data</i>	✓ <i>2023 data</i>	✓ <i>2024 data</i>	✓ <i>2025 data</i>
CORSIA Eligible Fuels*		<i>Optional</i> <i>2019 data</i>	<i>Optional</i> <i>2020 data</i>	✓ <i>2021 data</i>	✓ <i>2022 data</i>	✓ <i>2023 data</i>	✓ <i>2024 data</i>	✓ <i>2025 data</i>
Cancelled Emissions Units							✓ <i>2021-2023</i> <i>data</i>	

* Information can be reported annually or once at the end of each three-year cycle.

State reporting to CORSIA Central Registry

Status as of 30 September 2021

172

CCR States
Accounts

248

CCR Users
Accounts

617

Aeroplane
Operators reported

64

Accredited
Verification Bodies
reported



116

2019 CO₂ Reports
in CCR

586

Mtonnes of 2019
CO₂ submitted

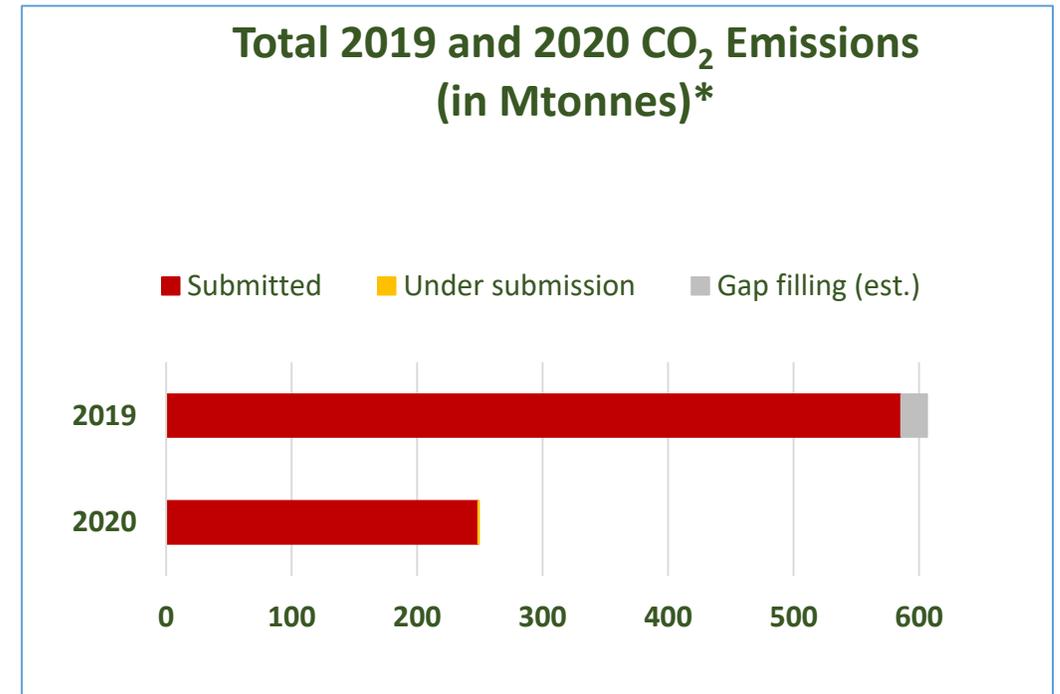
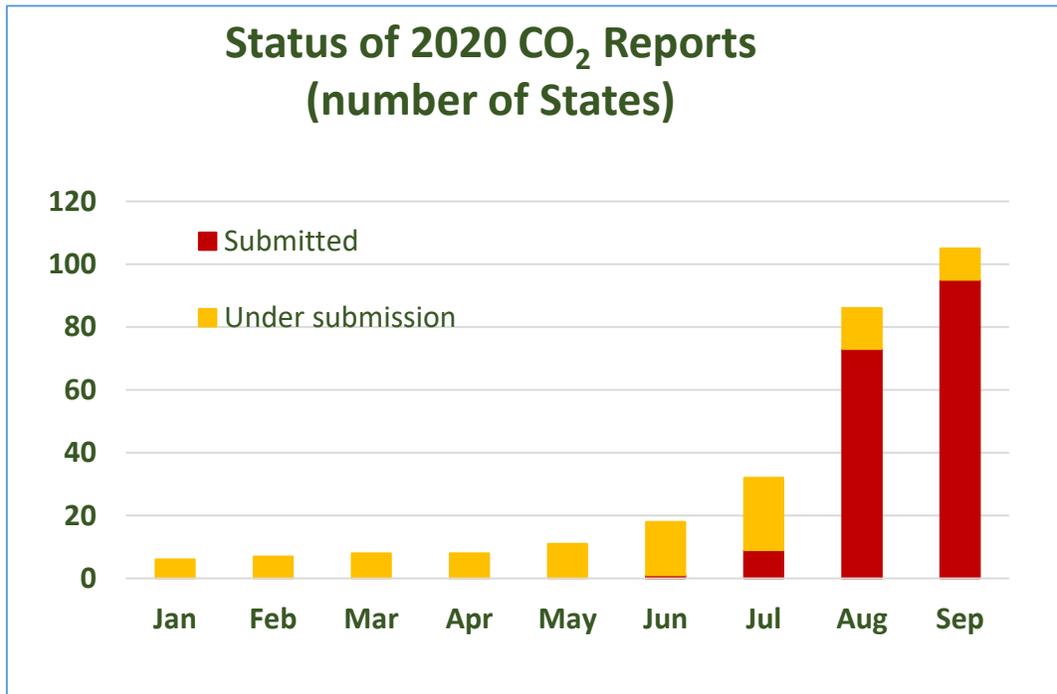
91

2020 CO₂ Reports
in CCR

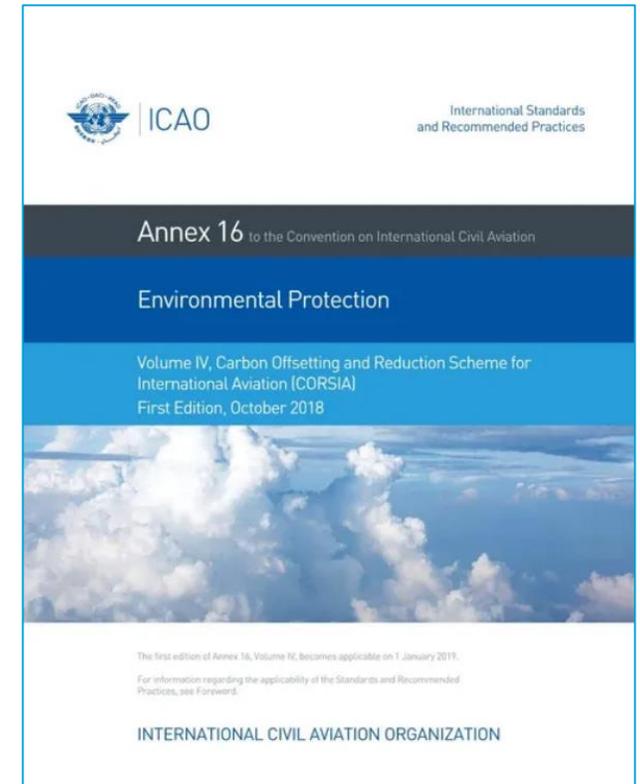
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Mtonnes of 2020
CO₂ submitted

Status as of 30 September 2021

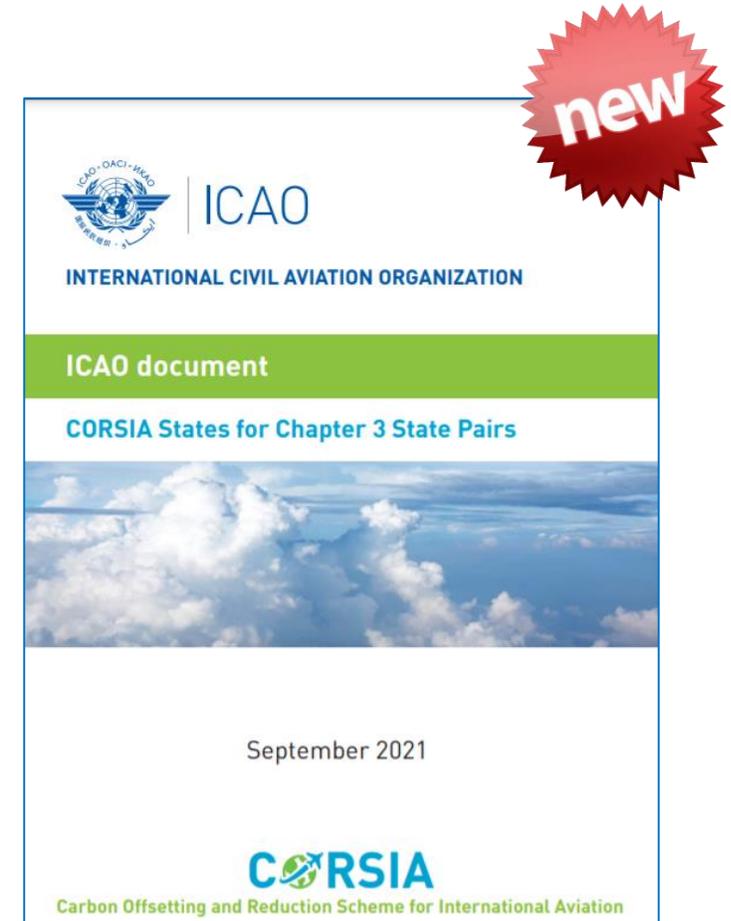


- Refer to Part II, Chapter 3 of the Annex 16, Volume IV
- How to calculate CO₂ offsetting requirements under CORSIA ?
 1. Applicability of CO₂ offsetting requirements
 2. CO₂ offsetting requirements for individual operators
 3. CO₂ reductions from the use of CORSIA eligible fuels
 4. Total final CO₂ offsetting requirements for a given compliance period (3 years)



1. Applicability of Offsetting Requirements

- Refer to Annex 16 Vol. IV – Part II Chapter 3, 3.1
 - From 1 January 2021 to 31 December 2035, **CORSIA offsetting requirements apply to an aeroplane operator with international flights between CORSIA participating States**
 - Defined in the ICAO Document “**CORSIA States for Chapter 3 State Pairs**” (Revised 2nd edition published in Sep. 2021) – 88 volunteer States for 2021, and 107 volunteer States for 2022



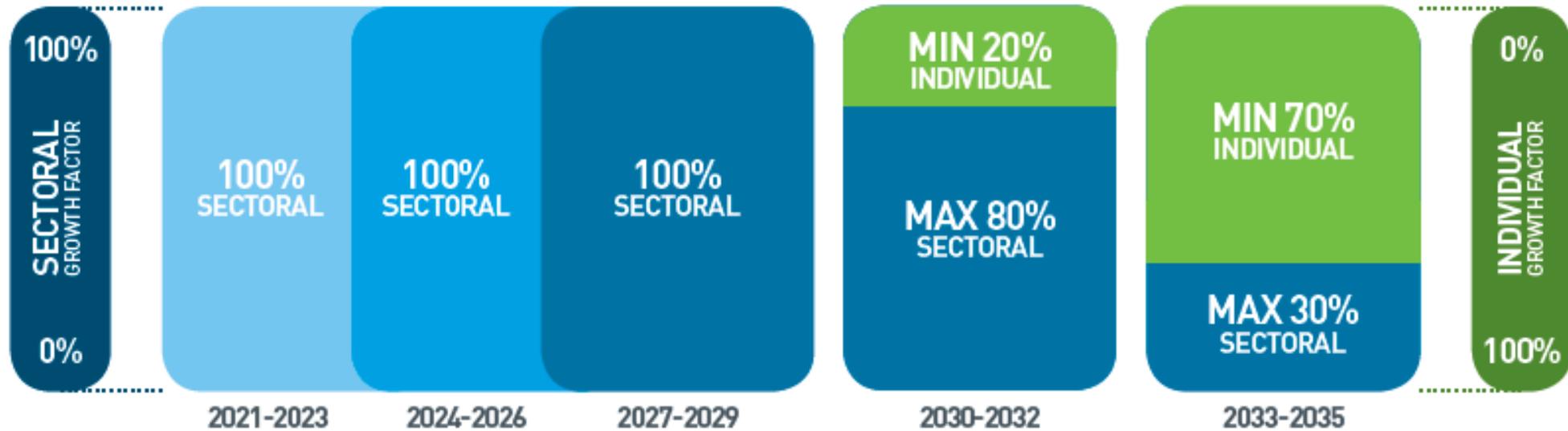
2. Offsetting Requirements for Individual Operators

- Refer to Annex 16 Vol. IV – Part II Chapter 3, 3.2

HOW TO CALCULATE CO₂ OFFSETTING REQUIREMENTS?

Operator's annual emissions X Growth Factor = CO₂ offsetting requirements

The Growth Factor changes every year taking into account both the sectoral and the individual operator's emissions growth. The Growth Factor is the percent increase in the amount of emissions from the baseline to a given future year, and is calculated by ICAO.



3. Emissions Reductions from the Use of CEF

- Refer to Annex 16 Vol. IV – Part II Chapter 3, 3.3
- An aeroplane operator can reduce its CORSIA offsetting requirements by claiming emissions reductions from the use of CORSIA eligible fuels (CEF):
 - The operator obtains the **life cycle emissions value (LS_f)** of the CEF. This is determined during the CEF sustainability certification process.
 - The operator calculates the **CEF emissions reductions (ER_y)**, as follows :

$$ER_y = FCF * \left[\sum_f MS_{f,y} * \left(1 - \frac{LS_f}{LC} \right) \right]$$

*Fuel Conversion Factor, fixed value,
3.16 for Jet-A/ Jet-A1 or 3.10 for AvGas/ Jet B
[kg CO2/kg fuel]*

*Total mass of CEF claimed
in the year y, by fuel type f [tonnes]*

*Baseline life cycle emissions, fixed value,
89 for jet fuel or 95 for AvGas
[gCO₂e/MJ]*

Example: If, in 2021, an operator uses 10,000 tonnes of Jet-A fuel produced from Used Cooking Oil from HEFA process (default **LS_f=13.9 gCO₂e/MJ**), the amount of emissions reductions will be:

$$ER_{2021} = 3.16 * \left[10,000 * \left(1 - \frac{13.9}{89} \right) \right] = 26,665 \text{ tonnes of CO}_2$$

You will hear more on ongoing work on CEF during CORSIA Forum today

4. Total Final Offsetting Requirements

- Refer to Annex 16 Vol. IV – Part II Chapter 3, 3.4
- **Total final offsetting requirements** for individual operators are those CO₂ emissions required to be offset in a given compliance period (3 year total), and are determined by subtracting the offsetting requirements with emissions reductions from the use of CORSIA eligible fuels during the period

$$FOR_c = (OR_{1,c} + OR_{2,c} + OR_{3,c}) - (ER_{1,c} + ER_{2,c} + ER_{3,c})$$

FOR_c = Operator's total final offsetting requirements in given compliance period c;

OR_{y,c} = Operator's offsetting requirements in given year y (y = 1, 2 or 3) of compliance period c; and

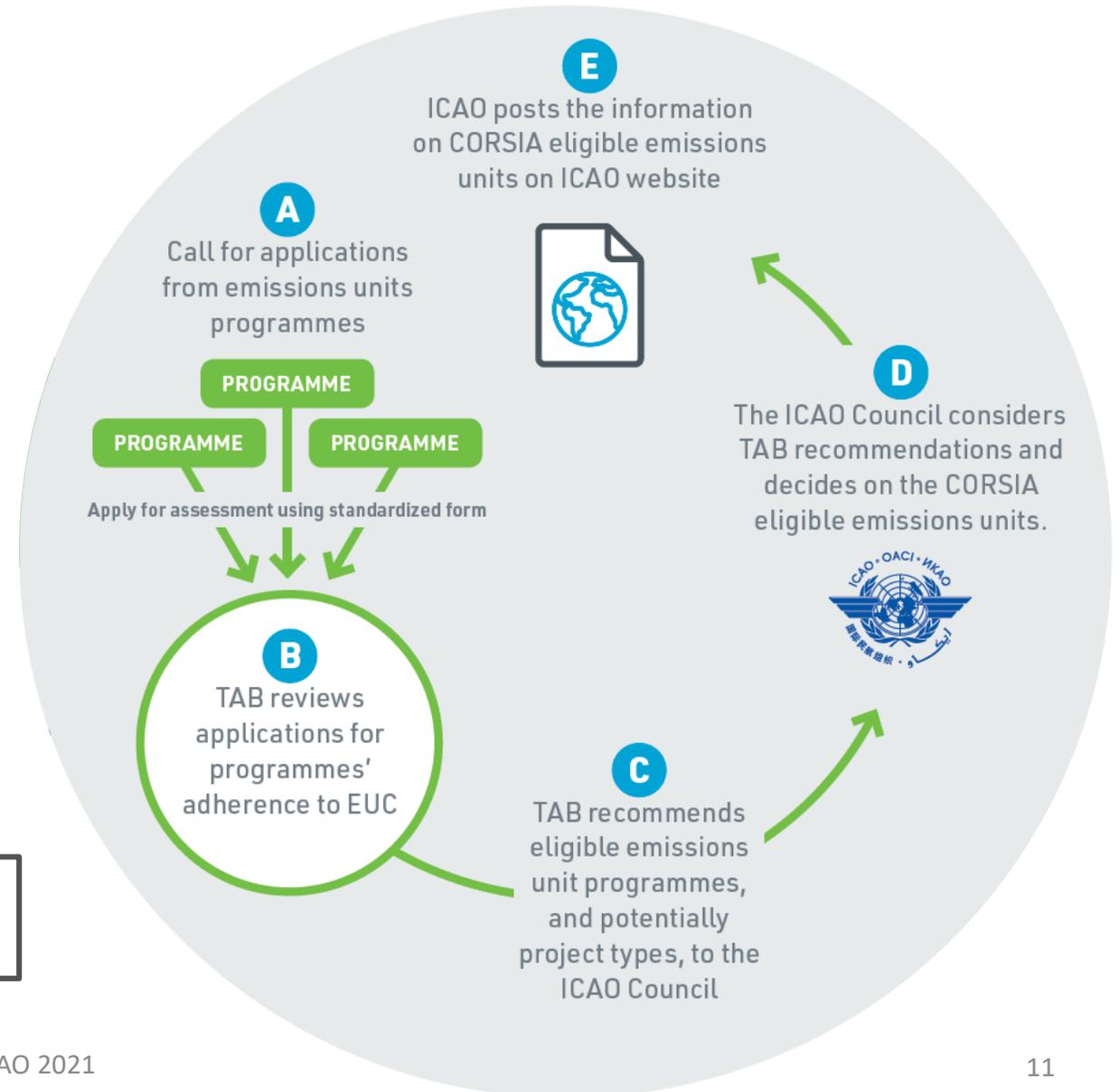
ER_{y,c} = Emissions reductions from use of CORSIA eligible fuels in given year y (y = 1, 2 or 3) of compliance period c.

In practice, the State will... sum up the operator's offsetting requirements for the 3-year compliance period, and corresponding reductions from CORSIA eligible fuels, to determine the operator's total final offsetting requirements during the period.

Cancelling CORSIA Eligible Emissions Units

- Refer to Annex 16 Vol. IV – Part II Chapter 4, 4.2
- The operator shall meet its **total final** offsetting requirements for a given compliance period by cancelling **CORSIA Eligible Emissions Units**
- ICAO process to determine CORSIA Eligible Emissions Units

You will hear more on the work on CORSIA Eligible Emissions Units during CORSIA Forum today





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THANK YOU