

Carbon Offsetting and Reduction Scheme for International Aviation (CORSI A)

*Coalition on Agricultural Greenhouse Gases meeting
Sacramento, CA
March 9, 2017*

Aviation Emissions

- 2% of global CO₂ emissions and growing
- 3 – 5% of warming impact
 - Other emissions
 - Contrails
 - Altitude
- Exempted from UNFCCC negotiations since Kyoto Protocol (1997)
- EU-ETS attempt to cover aviation from 2012 prompted action

International Aviation Governance

- International Civil Aviation Organization (ICAO)
 - UN agency
 - Established under the Convention on Civil International Aviation, the “Chicago Convention,” signed in 1944

ICAO Road to CORSIA

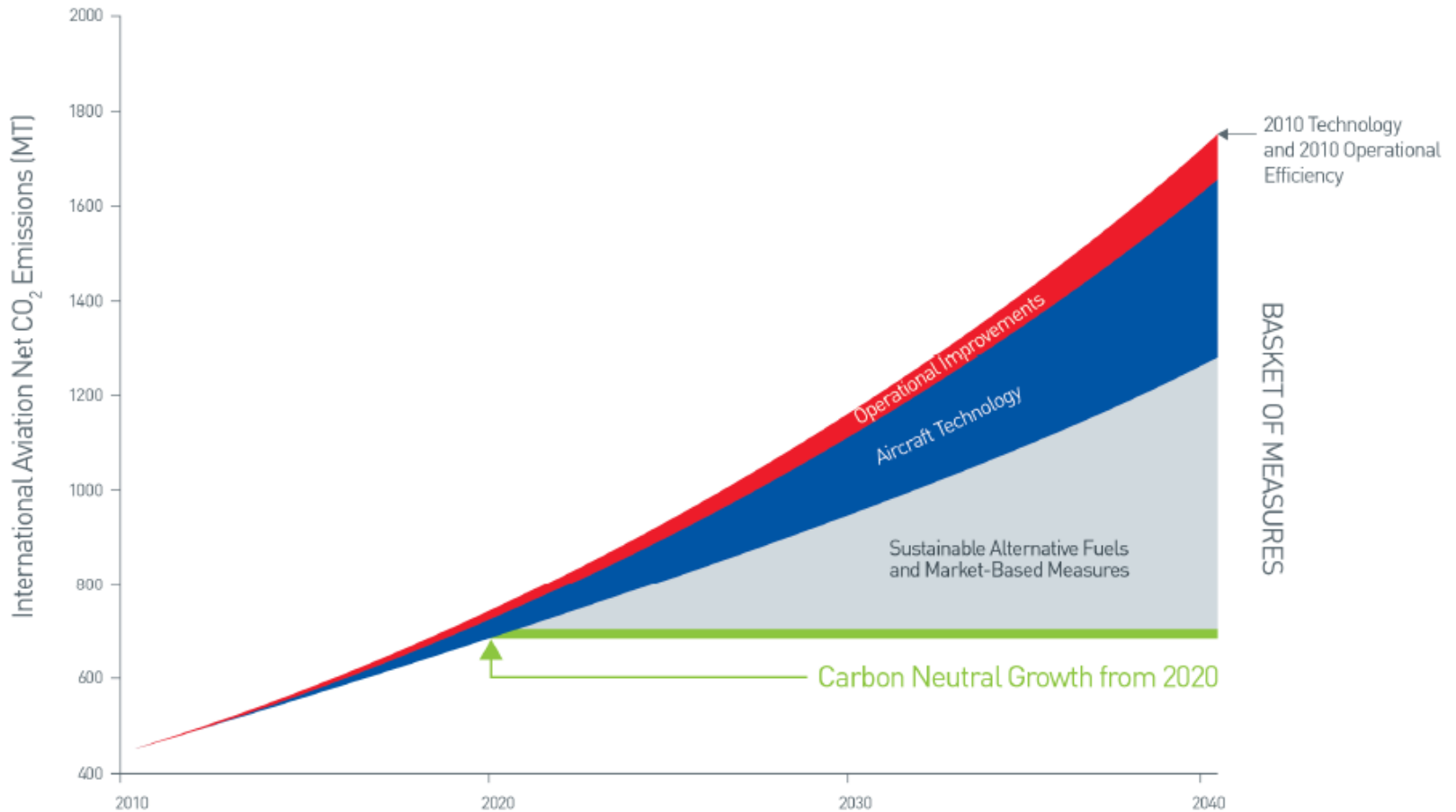


Source: UK Dept. of Transport

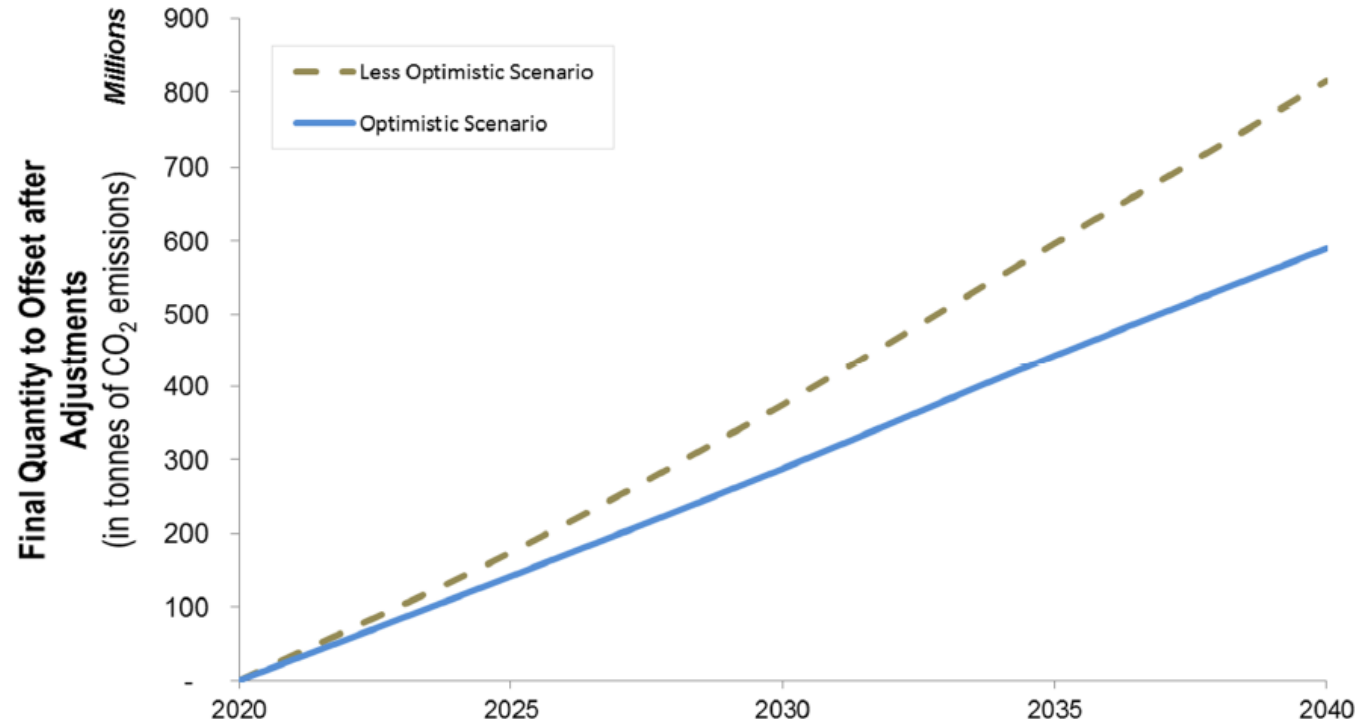
- Oct. 2016, 39th Assembly passed Resolution A39-3
- A39-3 decided that the Global Market-Based Mechanism (GMBM) would be fulfilled with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

Carbon Neutral Growth from 2020 (CNG20)

Contribution of Measures for Reducing International Aviation Net CO₂ Emissions



Potential Offsetting Requirements

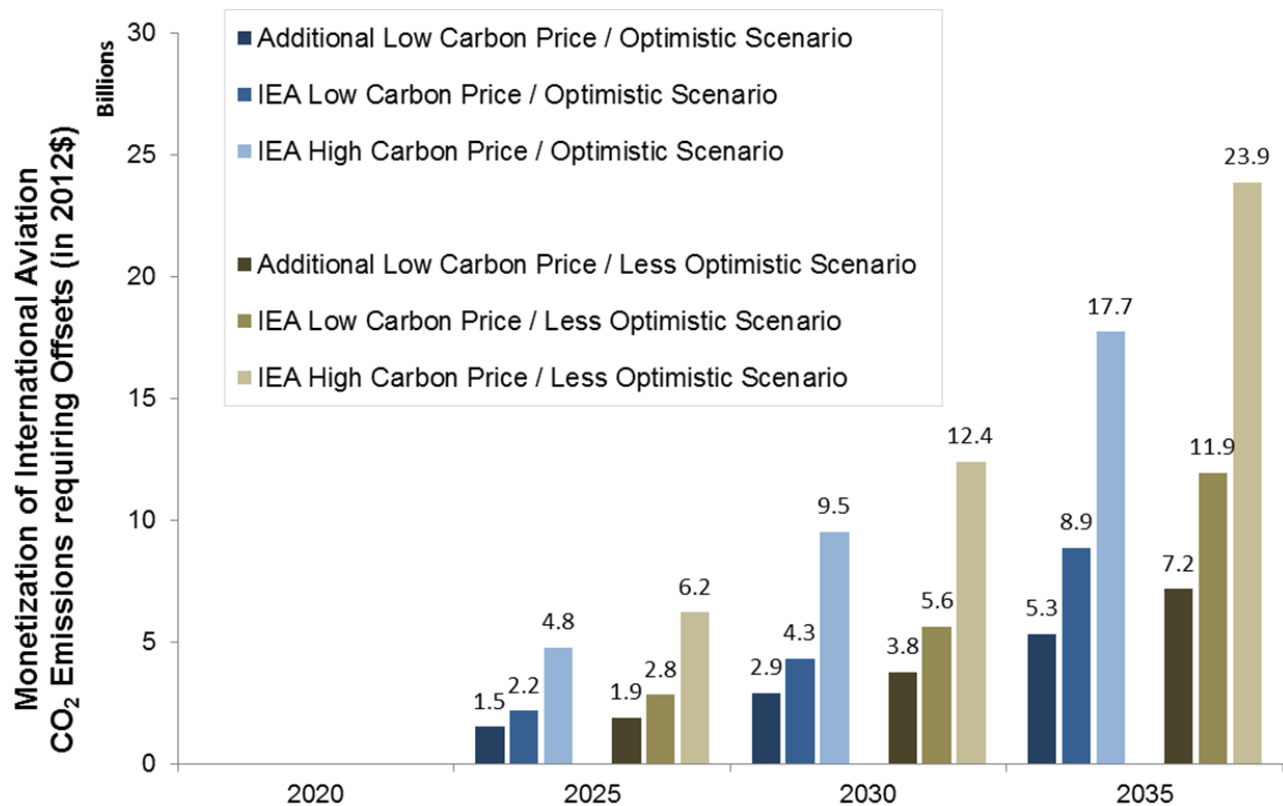


Final Quantity to Offset after adjustments (in Million tonnes of CO ₂ emissions)	2020	2025	2030	2035	2040
Less Optimistic Scenario	-	174	376	596	816
Optimistic Scenario	-	142	288	443	590

Source: CAEP analysis presented at EAG/15

Source: ICAO

Potential Offsetting Costs



Carbon Price Assumptions:

IEA High	20 \$/ton	33 \$/ton	40 \$/ton
IEA Low	8 \$/ton	15 \$/ton	20 \$/ton
Additional Low	6 \$/ton	10 \$/ton	12 \$/ton

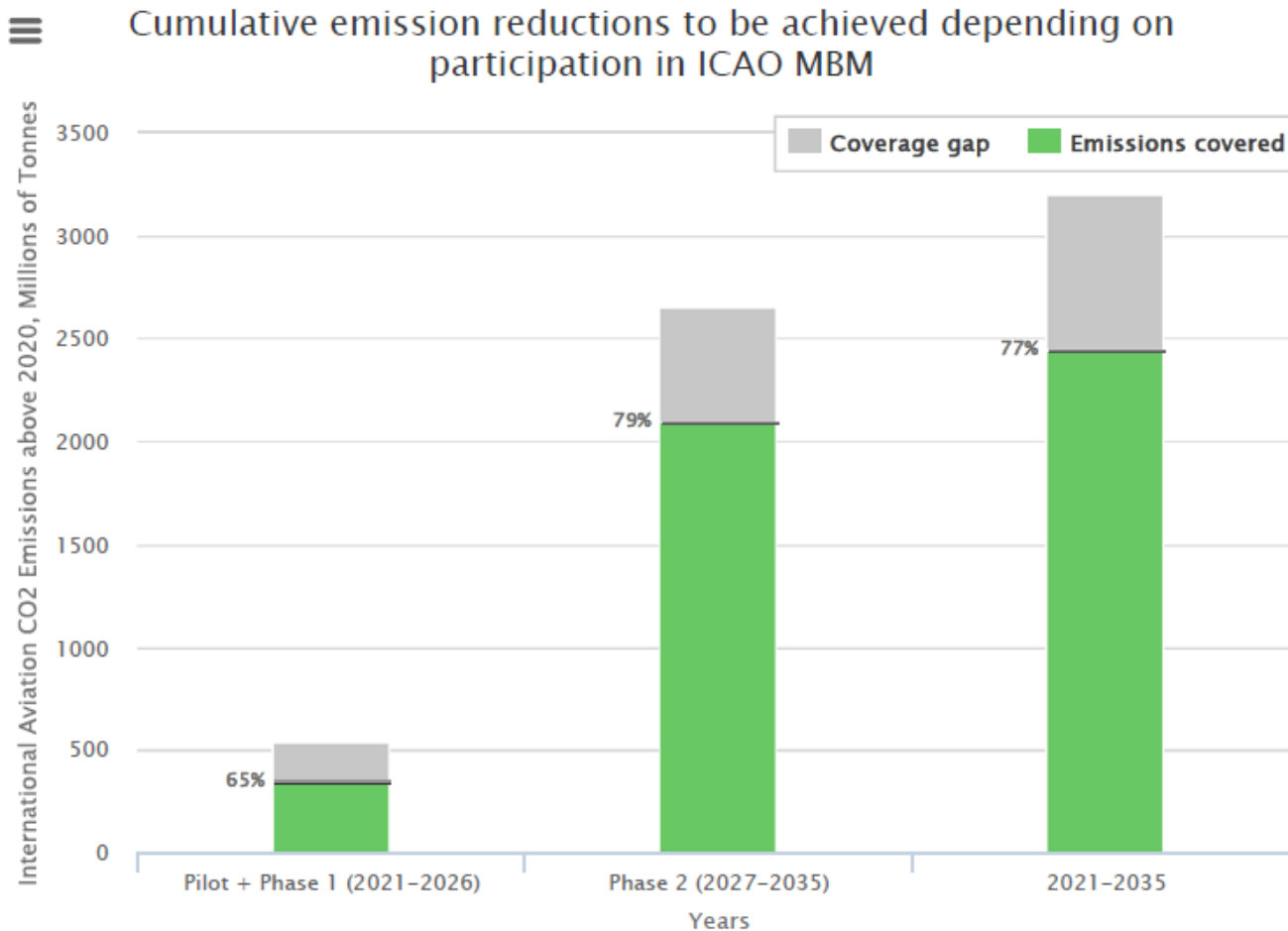
Source: CAEP analysis presented at EAG/15

Source: ICAO

Phases and Participation

- **2021-2023: Phase 1 (Pilot)**– Countries can voluntarily opt-in.
- **2024-2026: Phase 2 (CP1)** – First implementation phase, but also on a voluntary basis. Countries can voluntarily opt-in
- **2027-2035: Phase 3 (CP2)** – Second implementation phase to include most states. Mandatory compliance, unless exempted
- **Reviews every 3 years, starting in 2022.** Special review in 2032 will assess whether to extend GMBM.

Participation and CNG20



Environmental Defense Fund | edf.org/aviation

Establishing Infrastructure

- CORSIA MRV system will be implemented through ICAO Standards and Recommended Practices (SARPs)
- Emissions Units Criteria (EUC) system will be implemented through SARPs. Explicit support for UN-backed credits to be accepted (i.e., UNFCCC mechanisms under Paris may be eligible for use in CORSIA provided they align with ICAO technical quality criteria and avoid double-counting).
- Registry implementation work ahead.
- SARPs are to be agreed by the ICAO Council **by 2018** – states must implement **by 2019**.

Program and Offset Criteria

- CAEP is currently working on the criteria for emissions units to be purchased by operators under the global MBM:
 - **Programmes** that generate offset credits should have: clear methodologies and protocols; validation and verification procedures; avoidance of double counting/claiming, etc.;
 - **Offset credits** should be: additional; based on a realistic and credible baseline; represent permanent emissions reductions, etc.;

Challenges

- Double counting with Paris commitments
- Emissions Unit Criteria
- Emissions tracking
- Ongoing deferment of EU-ETS coverage



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