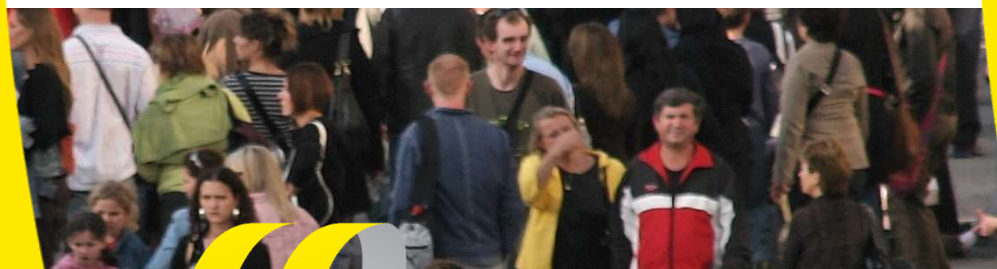




# A comparison between CORSA and the EU ETS for Aviation

European Parliament, 8 March 2017



## CE Delft

- Independent not-for-profit research and consultancy since 1978
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# Outline

1. Aim and scope of the study
2. Emissions and offsetting obligations under CORSIA
3. Emissions and allowance surrendering obligations under EU ETS
4. Comparison of CORSIA and EU ETS

## Aim and scope of the study

### Aim:

- Analyse the emissions covered in CORSIA and the EU ETS between 2021 and 2035
- Analyse the amount of emissions to be offset under CORSIA and the amount of emissions to be mitigated in the EU ETS between 2021 and 2035

### Scope:

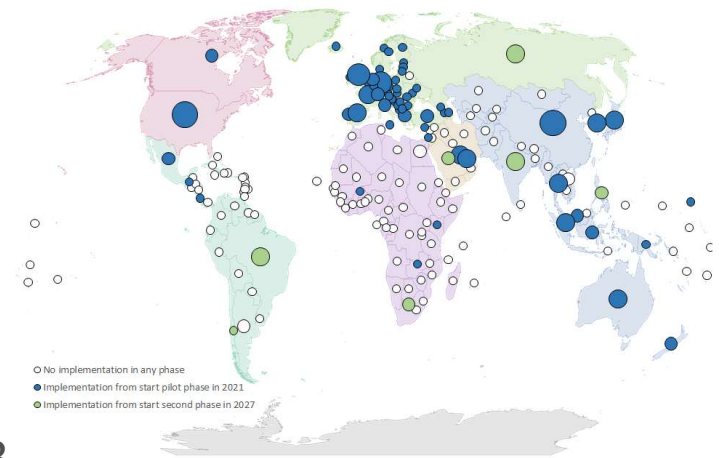
- Analysis of the difference between the emissions cap and the projected emissions (Not an analysis of environmental effectiveness)
- Time period 2021 - 2035 (in line with CORSIA)

### Method:

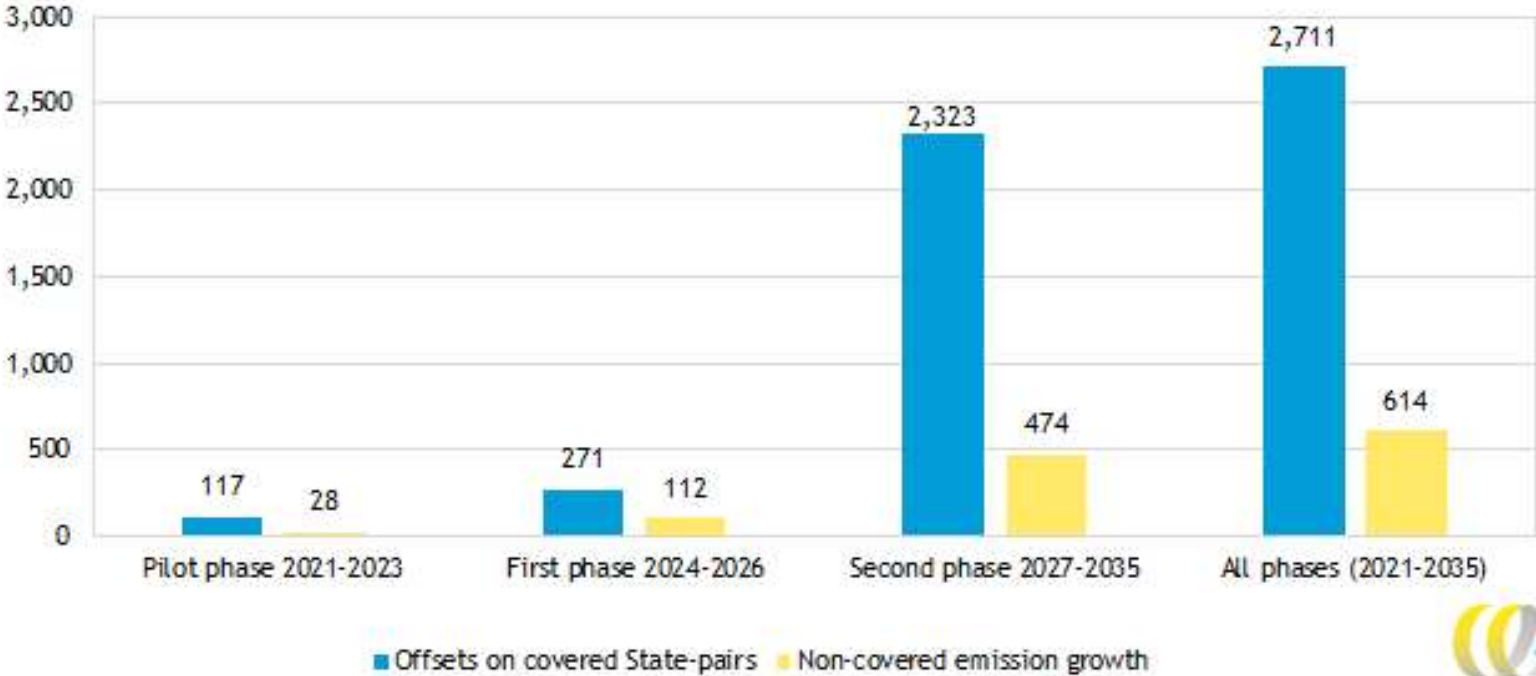
- Modelling with AERO-MS
- ICAO CAEP/9 most likely growth scenario

# CORSIA

- Agreed in 2016 in ICAO
- Aviation sector surrenders offsets for emissions above the 2019-2020 baseline
- Three phases
  1. Pilot phase (voluntary participation) 2021-2023
  2. First phase (voluntary participation) 2024-2027
  3. Second phase (mandatory participation for qualifying countries) 2028-2035
- Cumulative offsets : 2,711 Mt (81% of projected increase of emissions)
- Most offsets in second phase (longest period, most countries, highest projected emissions)



# CORSIA



## EU ETS

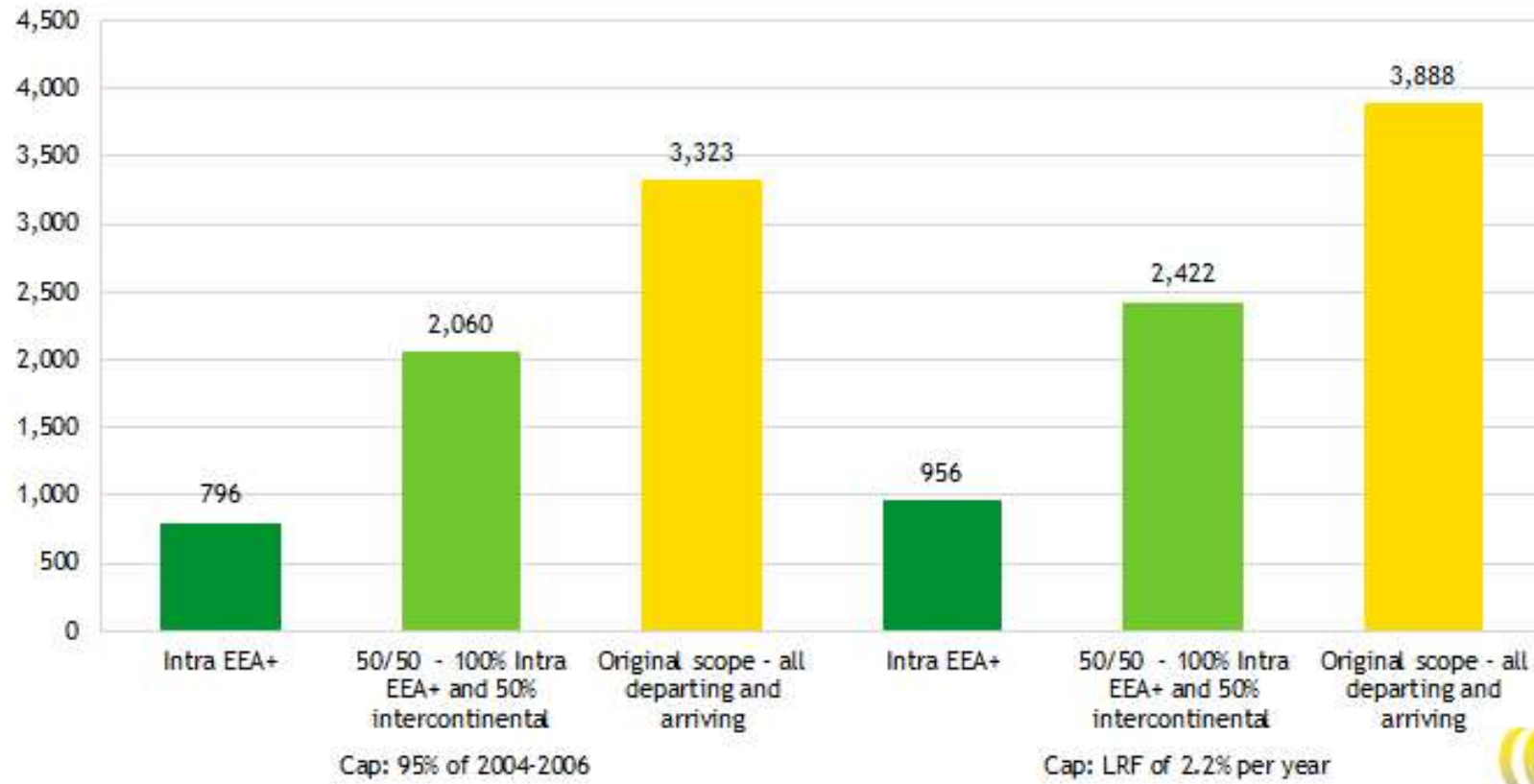
### Six scenarios

- Original scope
- 50% of emissions on departing and arriving flights
- Stop the clock (current scope)
- Either with or without Linear Reduction Factor of 2.2% from 2021

### Results

- Cumulative demand for allowances in original scope 3,800 - 3,800 Mt
- In stop the clock scope, demand for allowances 800 - 1,000 Mt

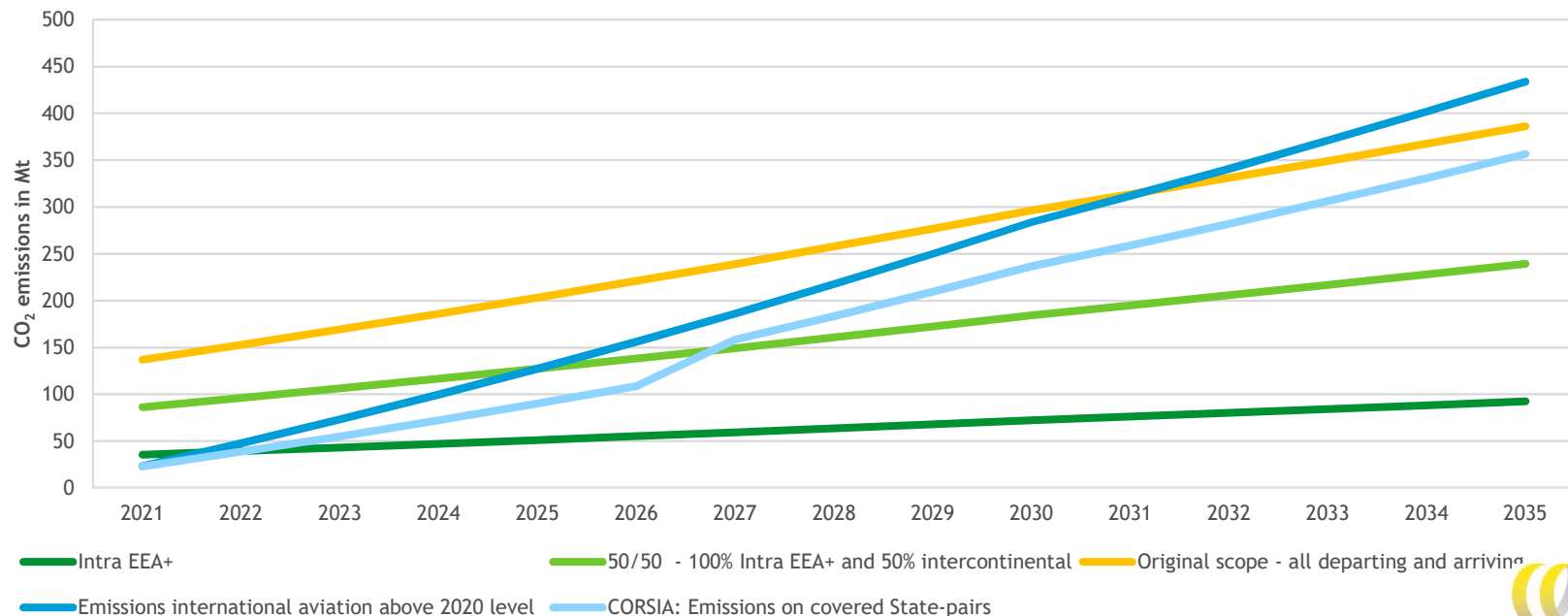
# EU ETS





## Comparison of CORSIA and EU ETS

- CORSIA: more emissions, EU ETS: lower cap
- At least 20% more emissions to be offset/mitigated under EU ETS original scope than under CORSIA
- Mitigation obligation in intra-EEA+ scope about 30% of CORSIA



## Comparison of CORSIA and EU ETS

- It takes 2-15 years for CORSIA to overtake EU ETS

	Annual emissions	Cumulative emissions from 2021 onwards
<b>Cap: 95% of 2004-2006</b>		
Intra EEA+	2022	2023
50/50 - 100% Intra EEA+ and 50% intercontinental	2027	2030
Original scope - all departing and arriving	2032	Not in 2021-2035
<b>Cap: LRF of 2.2% per year</b>		
Intra EEA+	2023	2024
50/50 - 100% Intra EEA+ and 50% intercontinental	2027	2033
Original scope - all departing and arriving	Not in 2021-2035	Not in 2021-2035



Thank you for your attention

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