

Aviation in an international climate regime: How much will it cost?

SH&E and ICF have combined their aviation and climate change expertise

SH&E

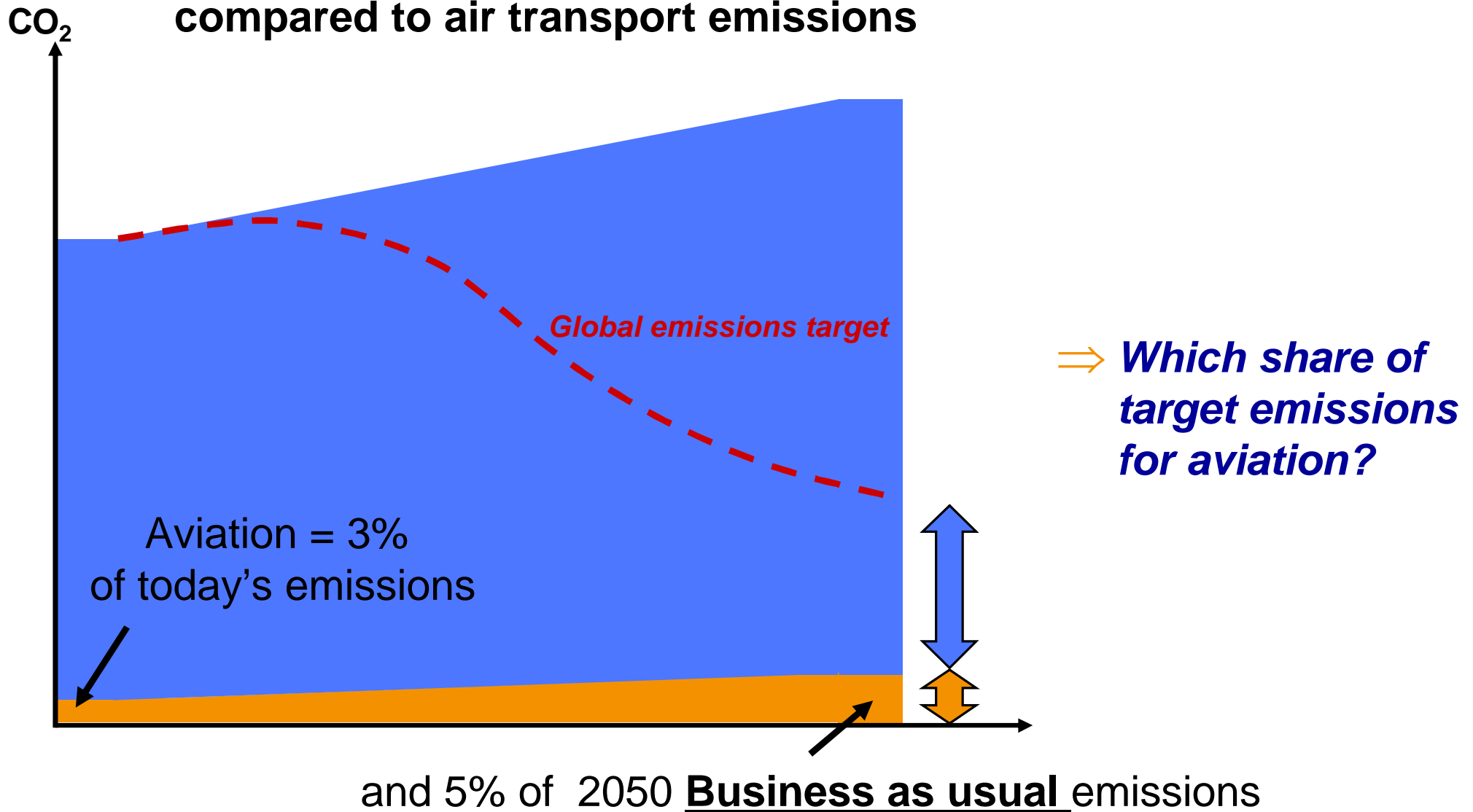
- ◆ **Founded in 1963, SH&E is the world's largest consulting firm specialising in commercial aviation**
- ◆ **Located in the US and the UK, its 100+ staff have provided consulting, strategic planning and technical services across the aviation industry, including:**
 - Airlines
 - Airports
 - Financial Institutions / Investors
 - Government agencies
 - Airframe and engine manufacturers
- ◆ **In 2007, SH&E joined ICF**

ICF INTERNATIONAL

- ◆ **ICF is a leading international management, technology, and policy consulting firm**
- ◆ **Climate change has been a core competence since the mid-1980s**
 - ICF's climate change team is composed of more than 250 experts
 - Clients include several national governments, international agencies, and more than 60 FT500 companies
- ◆ **ICF has extensive experience providing climate strategy services to EU ETS participants and to the Air Transport sector**

Despite progress in fuel efficiency, the aviation industry must make considerable efforts to reduce absolute CO₂ emissions

IATA's view (based on IPCC projections) of world emissions compared to air transport emissions



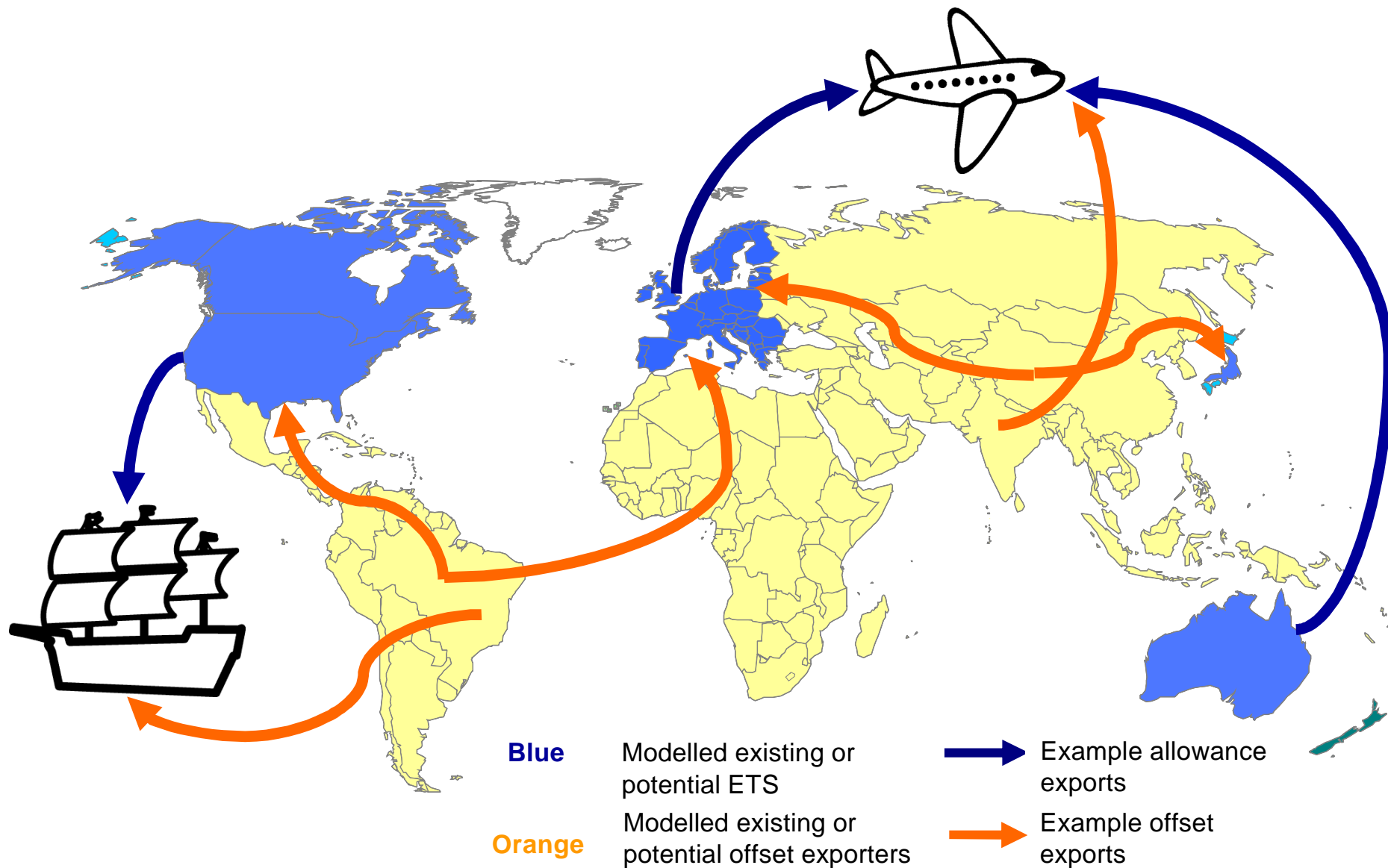
What is a “tenable” emission trajectory for international aviation?

Stakeholder views

- ◆ **General consensus among stakeholders that aviation should benefit from special treatment because it has limited options for reducing emissions**
 - **WWF** write: “We believe that it is justifiable to treat aviation as a unique case, because of its extremely rapid growth and because of the lack of readily available technological solutions.”
 - *Aviation emissions should be allowed to follow different trajectory*
 - *Efficiency or absolute target?*
- ◆ **In the long term, absolute emissions to decrease**
 - European Commission calls for reductions to “far below” 1990 levels by 2050
 - ICAO calls for reduction by 50% compared to 2005 levels

Global aviation in a post-Kyoto framework

How would it work?



How much would it cost?

Assumptions

- ◆ **How much aviation will pay for its carbon emissions will depend on:**
 - Targets adopted
 - Restrictions on use of emission reductions from other sectors and/or geographies (e.g., avoided deforestation)
 - Interpretation of common but different responsibilities
 - Auctioning

- ◆ **Assumptions used in this exercise:**
 - Global emission reduction target for the sector
 - ➔ *Back to 2005 levels by 2020, linear reduction to 50% below by 2050*
 - No restriction on the use of emission reductions

Preliminary Results

Price paid by aviation to other sectors to reduce emissions

- ◆ **EU ETS compliance cost**

Flights within/to/from EU	2020	2030
Billion \$	12	35

Source: ICF International

- ◆ **Compliance cost for global aviation (domestic + int'l) in a global scheme**

Global aviation	2020	2030
Billion \$	12	50

Source: ICF International

- ◆ **Waxman-Markey estimated compliance cost for US airlines in 2020: \$10 billion**

Source: ATA

- ◆ **Cost of international scheme for global aviation ~ cost of EU ETS alone!**

EU ETS + Waxman-Markey +...

➔ **More expensive than an international scheme**

At a global level, the industry has nothing to lose...

➔ **Challenge will be to reconcile the views of different players**

SH&E

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Thank you.

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