



Evaluating Economic Measures

Introduction

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Market-Based Measures Defined

➤ What?

- “Policy tools that are designed to achieve environmental objectives in a more flexible manner than traditional command and control regulatory measures.” (ICAO Definition)

➤ Why?

- Typically, create or enhance a “market signal” where the status quo is not incentivizing preferred behavior

➤ How?

- Put a greater cost or economic incentive on the activity concerned

➤ Whether?

- Are such measures needed for aviation, and what effects would they have?

Types of Measures

- Technology, Operational & Infrastructure Measures
- Economic Measures
 - Voluntary Measures
 - Positive Economic Incentives
 - Negative Economic Incentives
 - Taxes/Charges
 - Emissions Trading (can be positive for some industries, but not so for aviation – need significant calibration)

View from U.S. Aviation

➤ Voluntary Measures Make Sense

- Airlines are doing and have done a great deal to address climate change without government fiat
 - Airlines drive to be fuel efficient = GHG efficiency
- U.S. airlines have an excellent record
 - 103% fuel efficiency improvement since 1978
 - 4% absolute fuel burn and emissions reduction between 2000 and 2006, while moving 12% more pax and 12% more cargo
 - 30% fuel efficiency improvement commitment 2005-2025
- 90% of improvements to date from airlines' own investment

View from U.S. (continued)

➤ Economic Incentives Make Sense

- Warranted for investments in capital-intensive industry

- Certain measures with significant environmental improvement involve public-private benefits and partnership, for example:

 - Air traffic control modernization (including equipage)

 - Aviation environmental research & development

 - Alternative fuels

View from U.S. (continued)

➤ Punitive Measures Do Not Make Sense

➤ Taxes/charges

- Studies show ineffective and costly

- Though could be calibrated

- ICAO analysis failed to take this into account

- Reinvestment of proceeds is critical

➤ Emissions trading

- Also costly and takes \$ out of aviation

- Calibration and reinvestment of proceeds critical



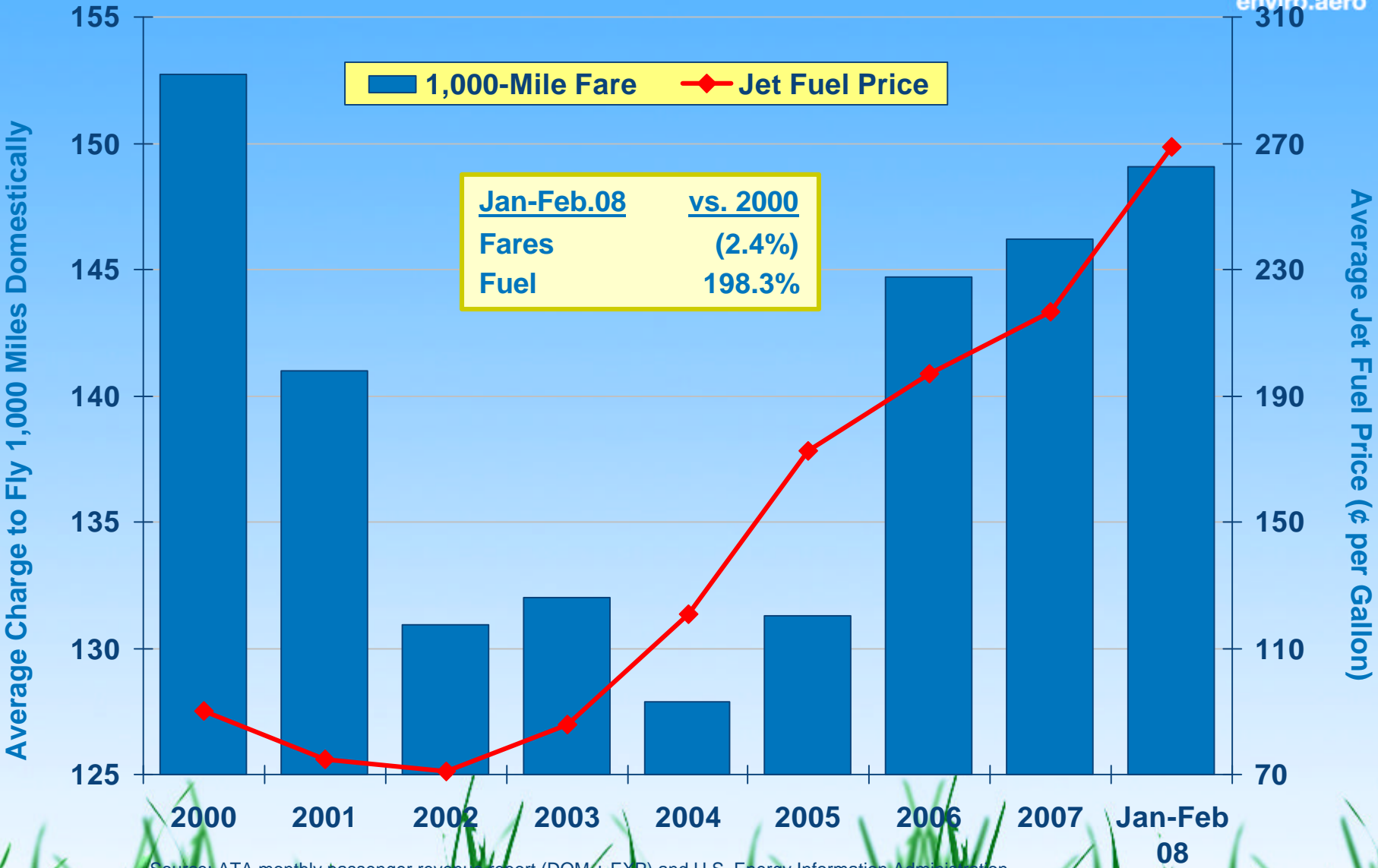
Proliferation of Emissions Trading Proposals

- European Proposal to Add Aviation into the Existing Emissions Trading Scheme (ETS)
- U.S. Proposals
 - 10 major bills in U.S. Congress
 - Another major bill expected soon from Congressmen Dingell and Boucher
 - “Front-runner” bill = “Lieberman-Warner Climate Security Act”

Overview of Lieberman-Warner

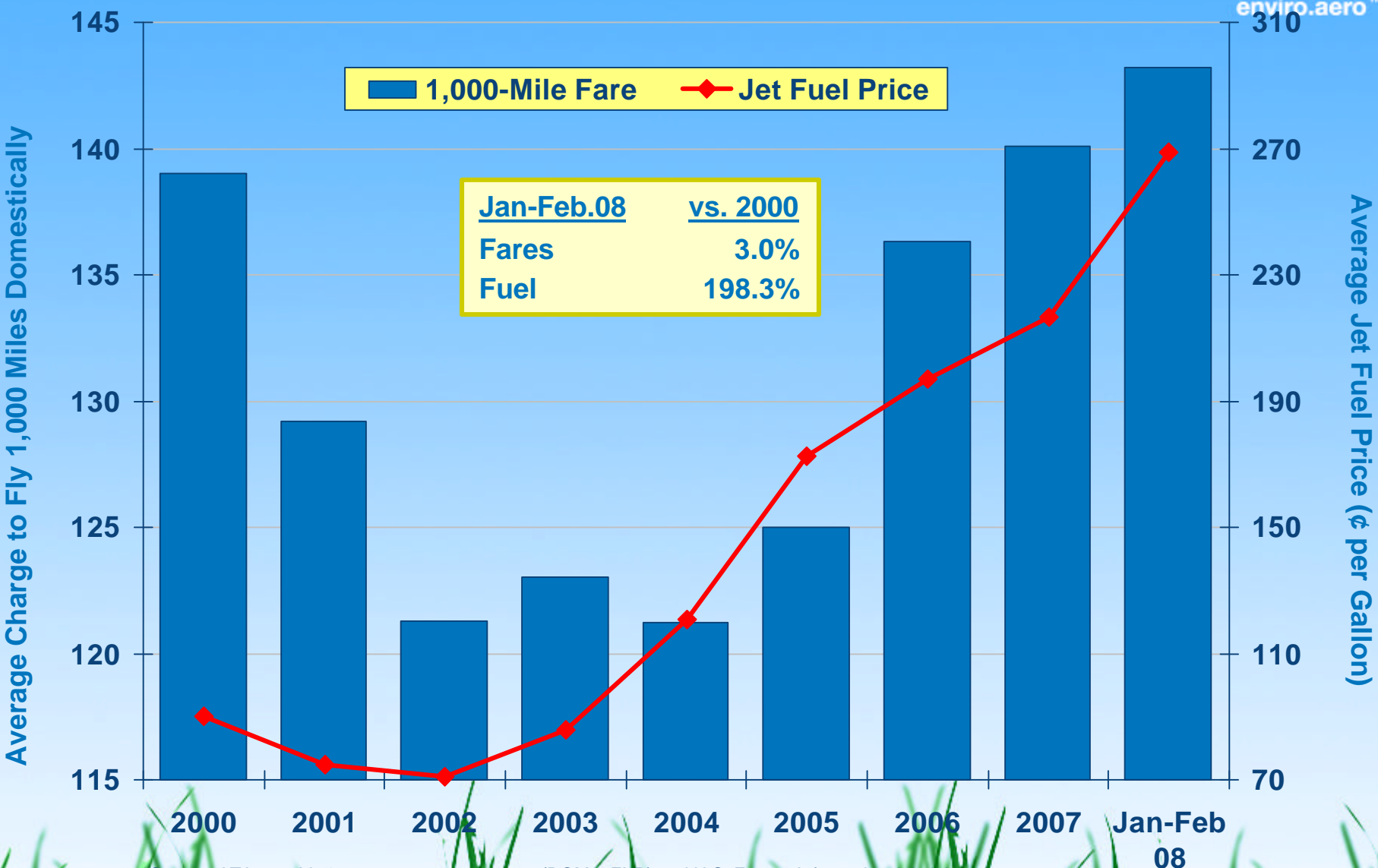
- Cap-and-trade
- 2012+
- Very Complex
 - Would cover about 80% of emissions (compare with ETS, which covers 45%)
 - Would cover 6 GHGs (compare with ETS, which covers only CO2)
- Would Cover Aviation through Fuel Purchases
 - Domestic and international
- Some Sectors Free Allowances (Not Aviation)
- Reinvestment of Funds into Certain Industries (Not Aviation)
- Would Be Very Expensive
 - \$5 billion annual cost to U.S. airlines beginning 2012 (escalates)
 - Improper assumption that airlines can pass costs along

As of Early 2008, Domestic Airfares Remain Below 2000 Levels, While Jet Fuel Prices Have Tripled



Source: ATA monthly passenger revenue report (DOM + EXP) and U.S. Energy Information Administration

As of Early 2008, System-wide Airfares Just Above 2000 Levels, While Jet Fuel Prices Have Tripled



Source: ATA monthly passenger revenue report (DOM + EXP) and U.S. Energy Information Administration