

# Goals and Progress for U.S. Airlines in Introducing Sustainable Alternative Fuel

Alternative Aviation Fuels Pavilion,  
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# U.S. Airlines seeking a “new fuel dynamic”



**“ the aviation industry is eager for an entirely new fuel dynamic and will be an enthusiastic purchaser “**  
.....Letter dated 1/16/09 to President Elect Obama

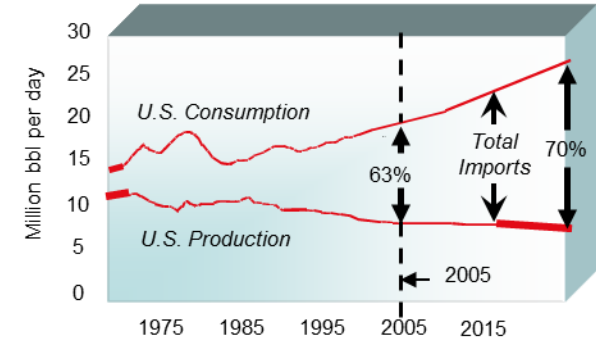
# What are the elements of a “New Fuel Dynamic”

## » Expanded Supply Chain

- Energy Security/Supply Reliability
- Competitor to Petroleum-Based Fuels

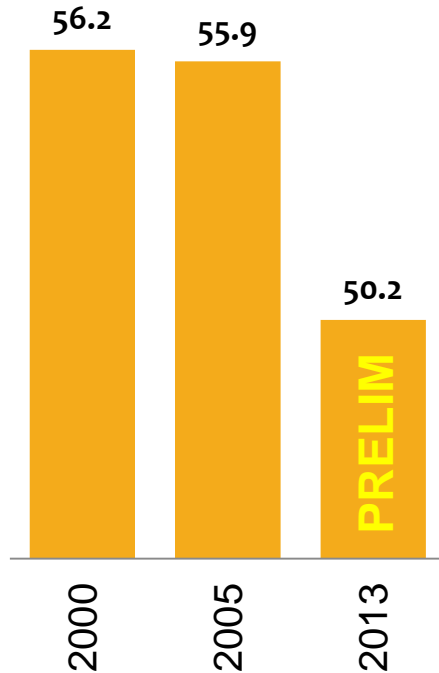
## » Environmental Benefit/Imperative

- Greenhouse Gas (Carbon) Emissions Benefits
- Reduce Emissions Affecting Local Air Quality
- Do Not Induce Other Environmental Problems



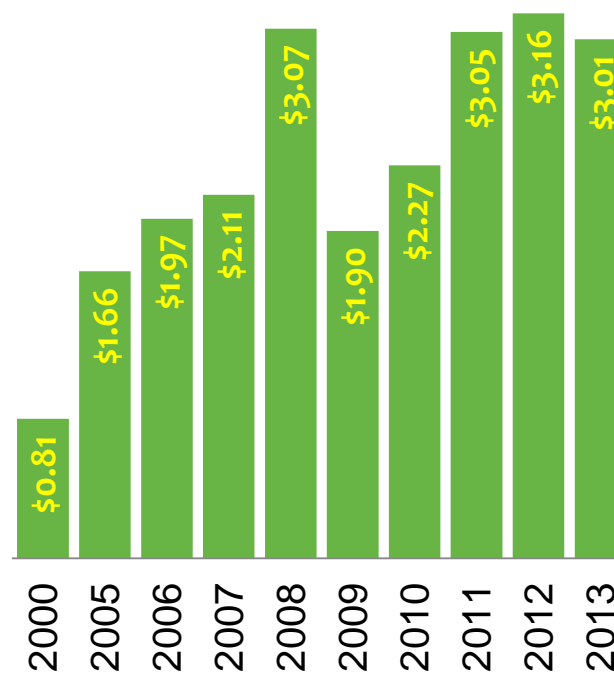
# U.S. Airlines Fuel Costs / Supply Challenge

**Using Less Fuel But ...**  
Million Gallons per Day



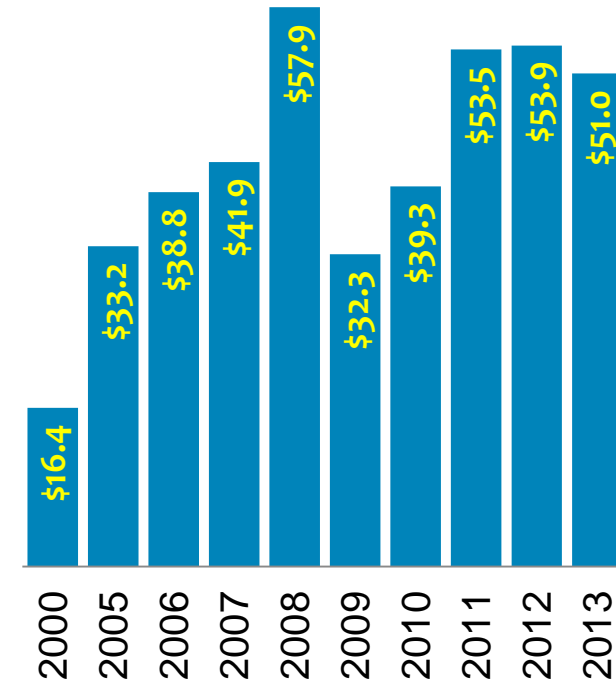
Source: BTS (T2: 921) for U.S. airlines

**Due to Rising Prices ...**  
USD per Gallon (Avg. Price Paid)



Source: BTS (Form 41 P-12(a) for U.S. airlines)

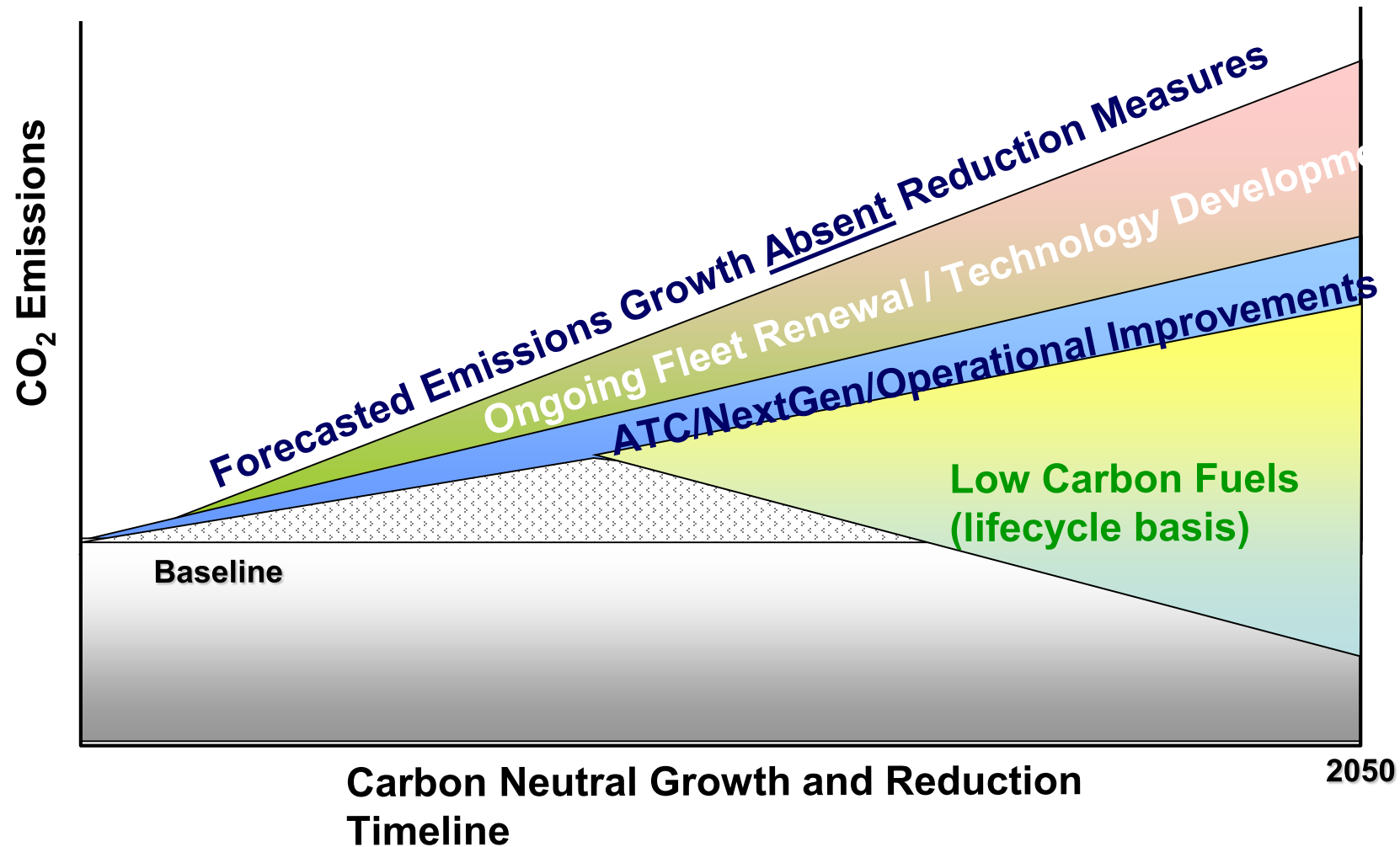
**... Incurring Higher Costs**  
Billion USD per Year



Source: BTS (Form 41 P-12(a) for U.S. airlines)

# Airlines Environmental Goals / Challenge

U.S. Airlines Committed to Do Their Part via CAAFI



# A4A Approach to building “New Fuel Dynamic”

- » **Use Public-Private Coalitions to Marshal Resources**
- » **Develop Guidance for Executing Commercial Deals / Ensuring Operational Success**
- » **Advocate Appropriate Government Policy to support Aviation Users**
- » **Implement Commercial Off-Take Agreements**

# Public-Private Coalitions Marshal Resources

- CAAFI® - alliances with Brazil, Germany, Australia, Spain
- Strategic Alliance with the U.S. Military (Defense Logistics Agency)
  - Combining experience and potential demand (market signals)
- *Farm to Fly* with the U.S. Department of Agriculture, CAAFI, Boeing (and other partners)
  - Primary focus on linking local feedstock supply chain with fuel production and end users; leverage USDA programs
- Regional initiatives: e.g., SAFN & MASBI



# Guidance for Commercial / Operational Success

- » **Develop Guidance for Fuel Company / Airline Interface**
  - “Guidance for Selling Alternative Fuels to Airlines”  
[http://www.caafi.org/files/CAAFI\\_Business\\_Team\\_Guidance\\_Paper\\_060413.pdf](http://www.caafi.org/files/CAAFI_Business_Team_Guidance_Paper_060413.pdf)
- » **Execute Airport Cooperative Research Programs to Quantify Environment and Economic Gains for Airports**
- » **Continuing to Work on Ensuring Fuel Quality**
  - e.g., Implementation includes on-airport confirmation of fuel quality (as with traditional jet fuel) before fueling



# Advocacy for appropriate government policy

## » Address Challenges Impeding Deployment

- All lifecycle emissions benefits must be creditable
- Need accounting and crediting consistent with the way we buy and fly our fuel
- Country-specific “sustainability” requirements serve as barriers

## » Seek Biojet Eligibility for Existing Biofuel Programs

- U.S. Programs such as biorefinery and biomass crop assistance, to date focused almost entirely on ground-based fuels (Ethanol)
- Crop insurance for proven energy crops

# Implement Commercial Off-Take Agreements



## » Demonstrate What Is Possible & Learning By Doing

- Innovation in financing
- Leveraging the product slate (can also be an opportunity for airports, for example, renewable diesel)



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# *Building a “New Fuel Dynamic” for U.S. Aviation*

