



Alternative Fuels: Why Do We Need Them?

John P. Heimlich
VP and Chief Economist

fuel@airlines.org

February 10, 2009

“Everyone is entitled to his own opinion, but not his own facts.” (Daniel Patrick Moynihan)

The Air Transport Association of America, Inc.

Combination Services

AirTran Airways
Alaska Airlines
American Airlines
Continental Airlines
Delta Air Lines
Hawaiian Airlines
JetBlue Airways
Midwest Airlines
Southwest Airlines
United Airlines
US Airways

All-Cargo Services

ABX Air
ASTAR Air Cargo
Atlas Air (incl. Polar)
Evergreen Int'l Airlines
FedEx Corporation
UPS Airlines

Associate Members

Air Canada
Air Jamaica
Mexicana

Lower Prices Do *Not* Alleviate Need for U.S. Energy Policy

- ✓ Budgets and Balance of Trade
- ✓ Economic Growth: Jobs
- ✓ Energy Security
- ✓ Environmental Protection
- ✓ Price Volatility

ATA Energy Priorities

A Portfolio of Solutions is Required

ATA supports a balanced, comprehensive U.S. energy policy that enhances U.S. energy security and results in predictable, stable and environmentally responsible supply and costs:



- ✓ **Expand access to domestic resources**
- ✓ **Reform energy commodities markets**
- ✓ **Accelerate development of alternative fuels**
- ✓ **Promote conservation and efficiency**

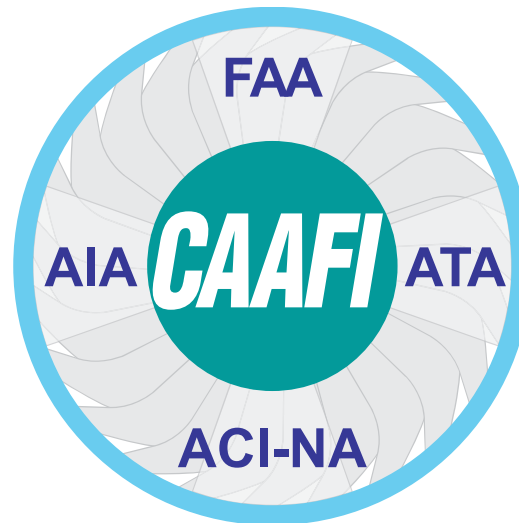
Examples:

- Make strategic energy reserves more readily available to commercial markets; invest proceeds in future supply
- Change the rules regulating energy commodity futures markets to make trading fairer and more transparent
- Oppose selected foreign countries' subsidization of consumer fuel prices
- Expand refining and distribution (pipeline) capacity to meet growing global demand for middle distillates
- Responsibly develop U.S. energy resources, including petroleum, gas, coal, nuclear, solar, wind and others
- Develop new, environmentally responsible aviation fuels

The ATA Alternative Fuels Commitment is Predicated on Performance; We Are Feedstock-Neutral

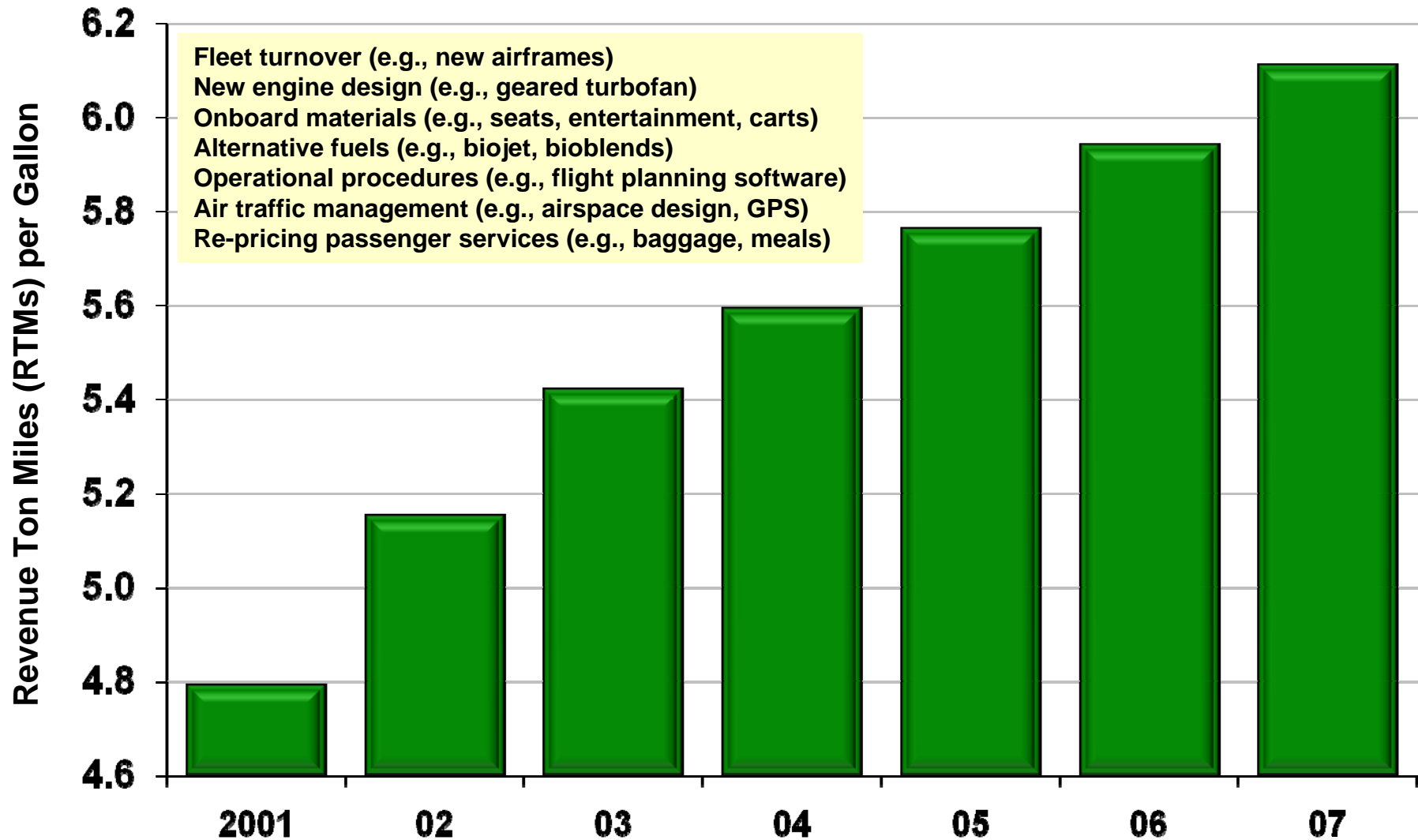
The members of the Air Transport Association of America (ATA) are dedicated to the development and deployment of safe, environmentally friendly, reliable and economically feasible alternatives to conventional petroleum-based jet fuel. We recognize that this effort presents significant technical and financing challenges. Further, we believe that we must proactively evaluate the commercial challenges associated with developing promising technologies that can meet our needs. We commit to work with future suppliers who potentially can integrate alternative fuels into our operations that are consistent with the principles on which we elaborate below. To foster the development and deployment of alternative jet fuels that meet our objectives, ATA is a founding and principal member of the *Commercial Aviation Alternative Fuels Initiative (CAAFI)*, a consortium of government agencies, airlines, manufacturers, airports, and current and prospective fuel suppliers that are coordinating work on the research and development of alternative jet fuels, including technical specifications, environmental aspects, production and distribution.

- ✓ **Fuel Quality**
- ✓ **Environmental Benefit**
- ✓ **Supply Reliability**
- ✓ **Economic Feasibility**



Source: <http://www.airlines.org/economics/energy/altfuelsprinciples.htm> (April 22, 2008)

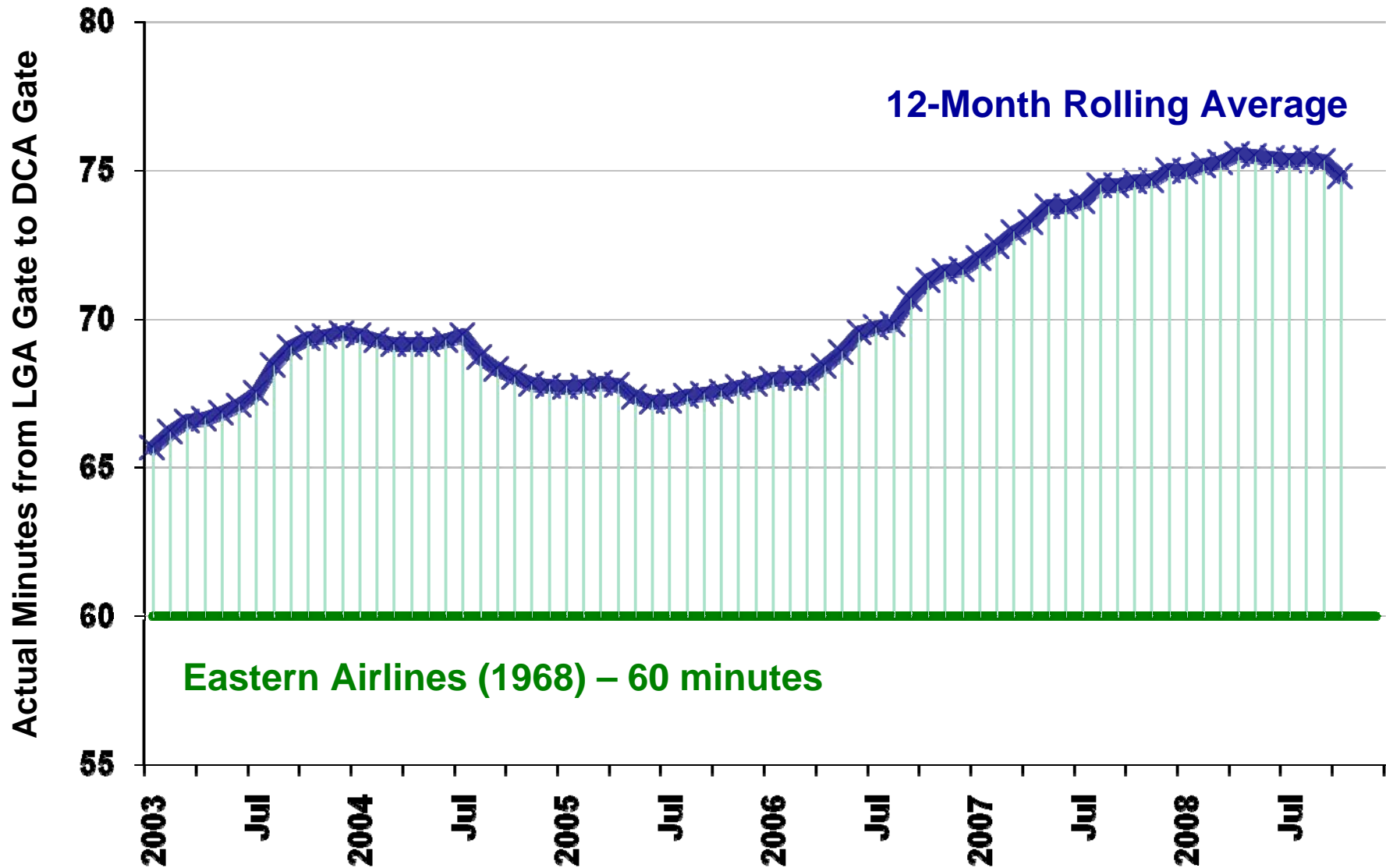
Airline Fuel Efficiency Gains Have Accelerated Post-2001



* U.S. passenger and cargo airlines operating worldwide – passenger and cargo revenue ton miles (RTMs) in all services
Source: ATA analysis of DOT Form 41 traffic data (T2-Z240) and gallons (T2-Z921)

Continental Drift Between New York and Washington?

Variability in Block Time (Min to Max) Amounts to \$600-\$750 per Flight*

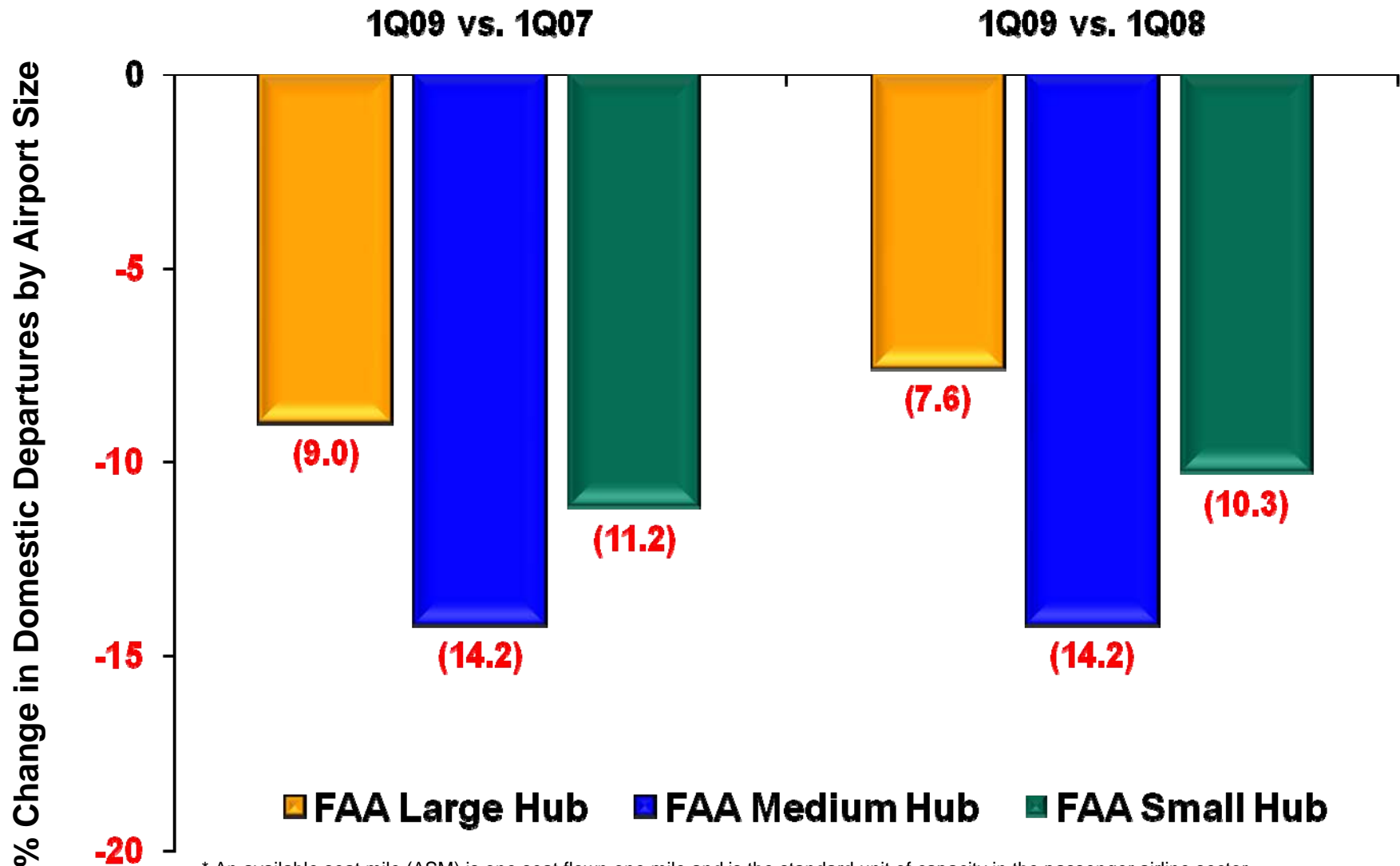


* Assumes \$65 per minute in direct (aircraft) operating costs

Source: ATA analysis of DOT T-100 segment database

NOT the Preferred Path to Reducing Emissions

2009 Comparisons to 2008 and 2007 Show Similar Pattern



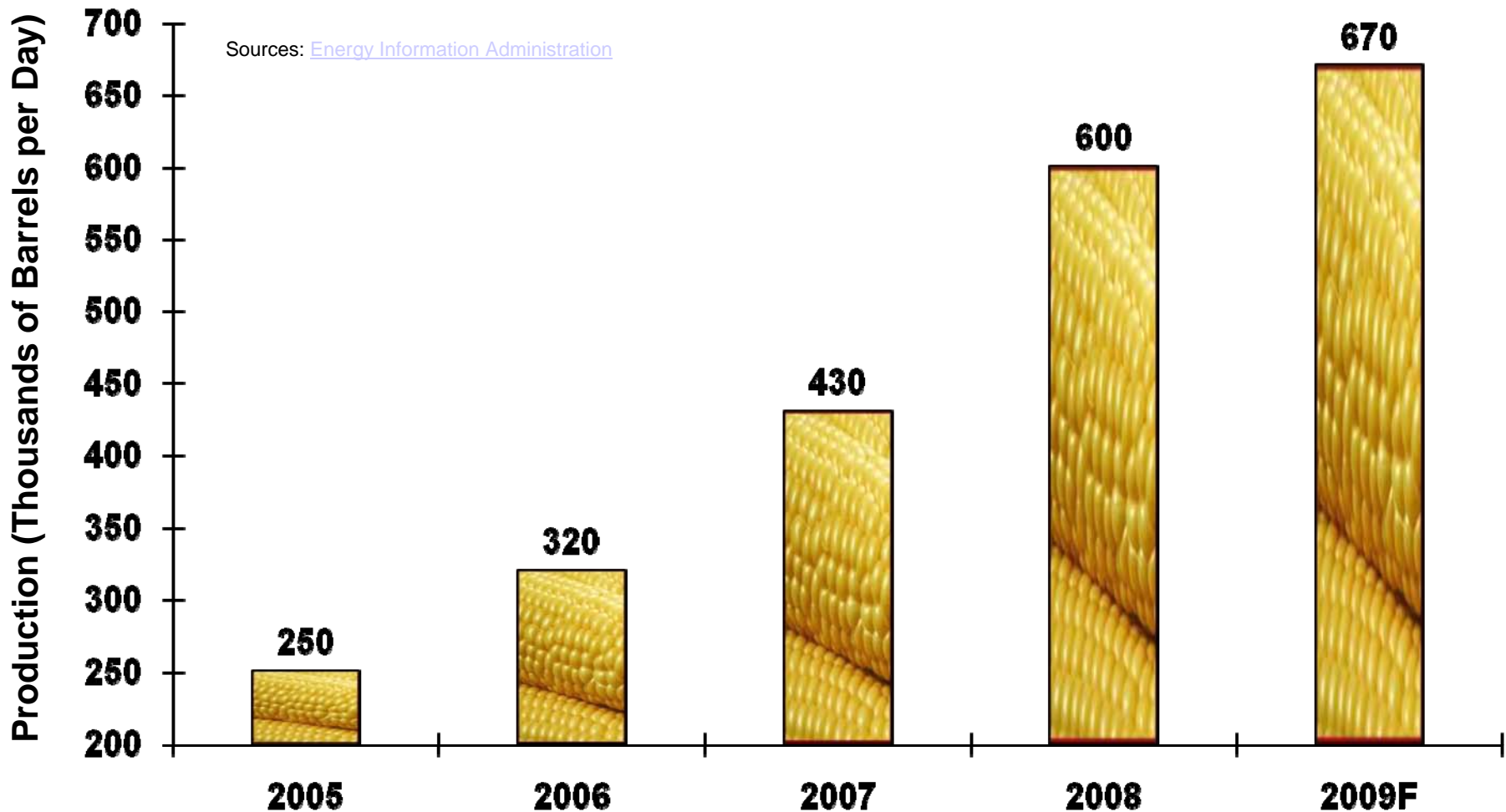
* An available seat mile (ASM) is one seat flown one mile and is the standard unit of capacity in the passenger airline sector

Source: ATA analysis of Innovata schedules as of Jan. 23, 2009

U.S. Ethanol Production Displacing Conventional Gasoline

Contributing in Part to Rising Price of Food, Jet Fuel, Heating Oil and Diesel

“If ‘Ethanol’ was a country, it would have been ranked number five last year among countries in...production growth.” Daniel Yergin, “Oil has reached a turning point,” *Financial Times* (May 28, 2008)

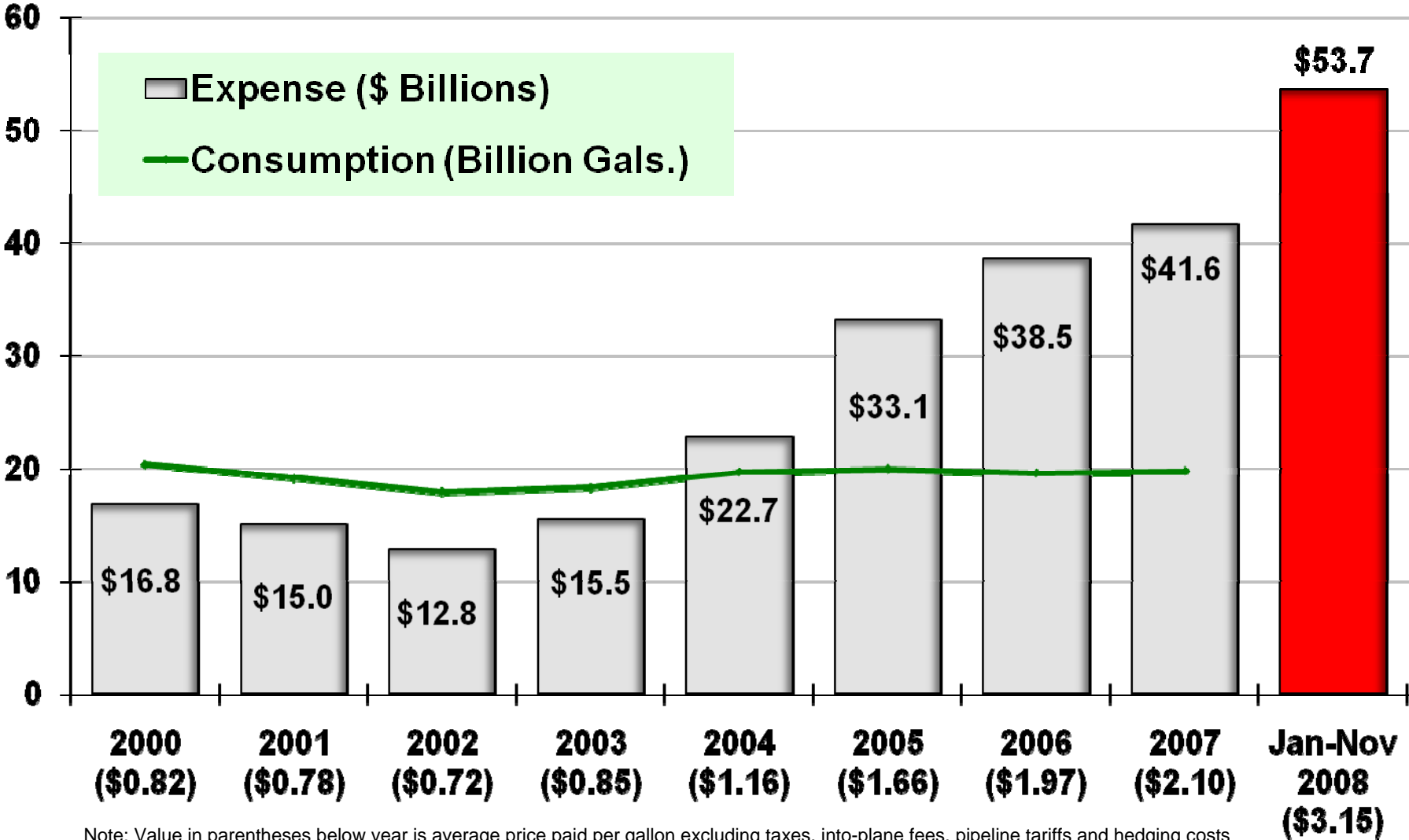


Supplies, Supplies, Supplies!



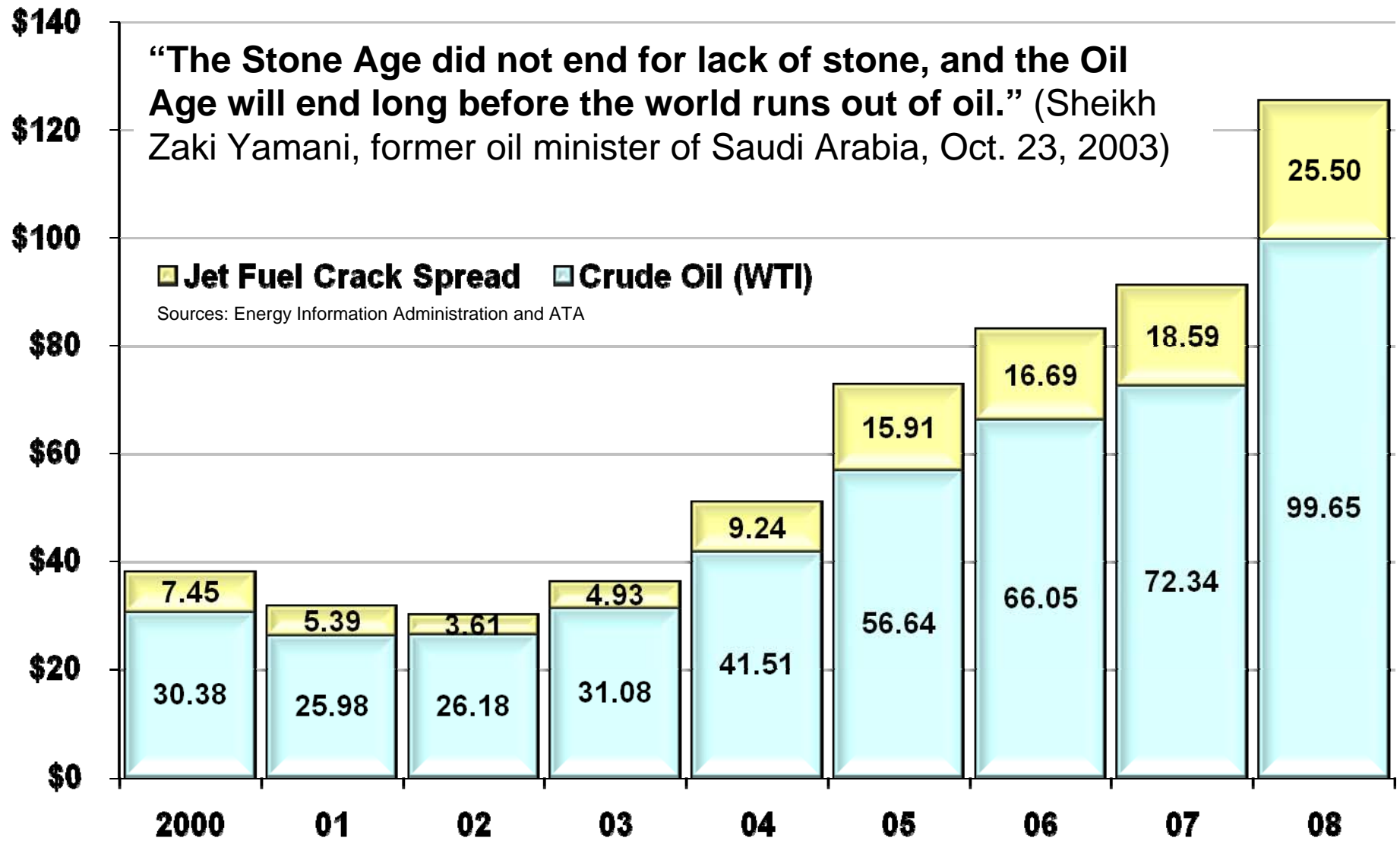
2008 Jet Fuel Expense¹ Poised to Exceed \$55 Billion

Excludes Fuel Taxes, Into-Plane Fees, Pipeline Tariffs and Hedging Costs

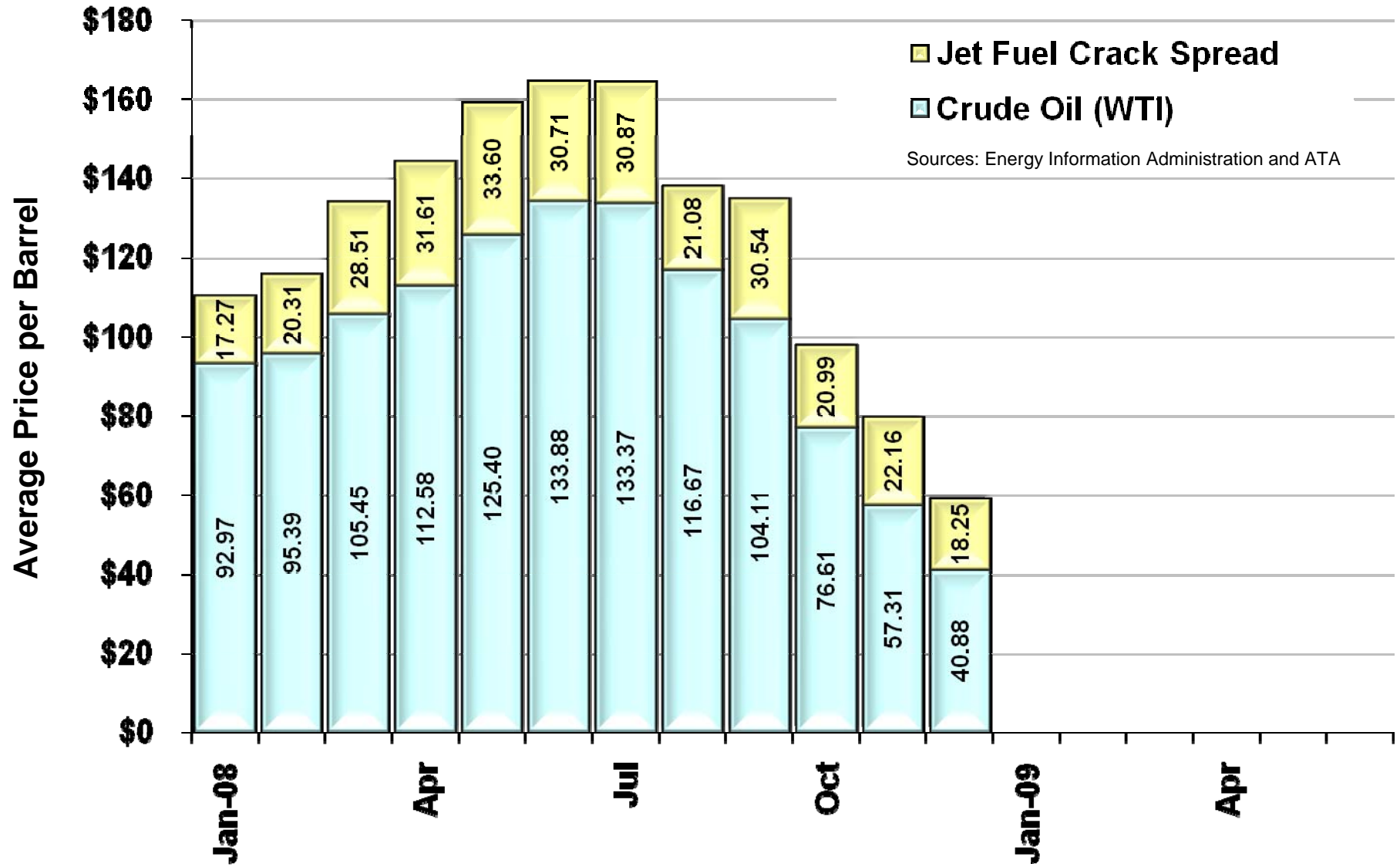


Note: Value in parentheses below year is average price paid per gallon excluding taxes, into-plane fees, pipeline tariffs and hedging costs
 Sources: ATA, Energy Information Administration, Department of Transportation

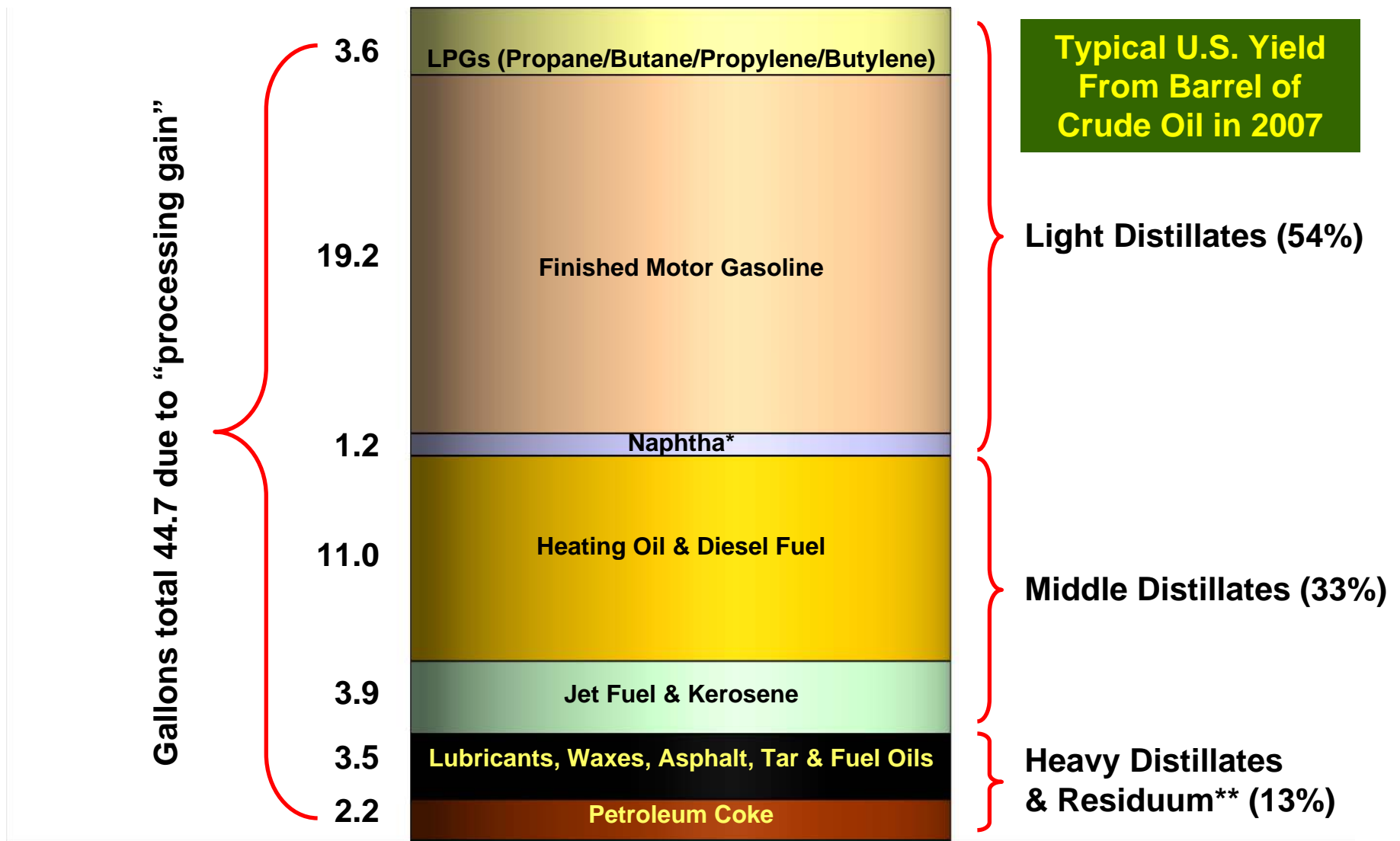
2008 Price of Jet Fuel Exceeded 2007 by \$34.22 per Barrel



Jet Fuel Prices Exhibited Record Volatility in 2008



Jet Fuel is a Drop in the Bucket: Airlines Beholden to Other Petroleum Segments, Given U.S. Refinery Configuration



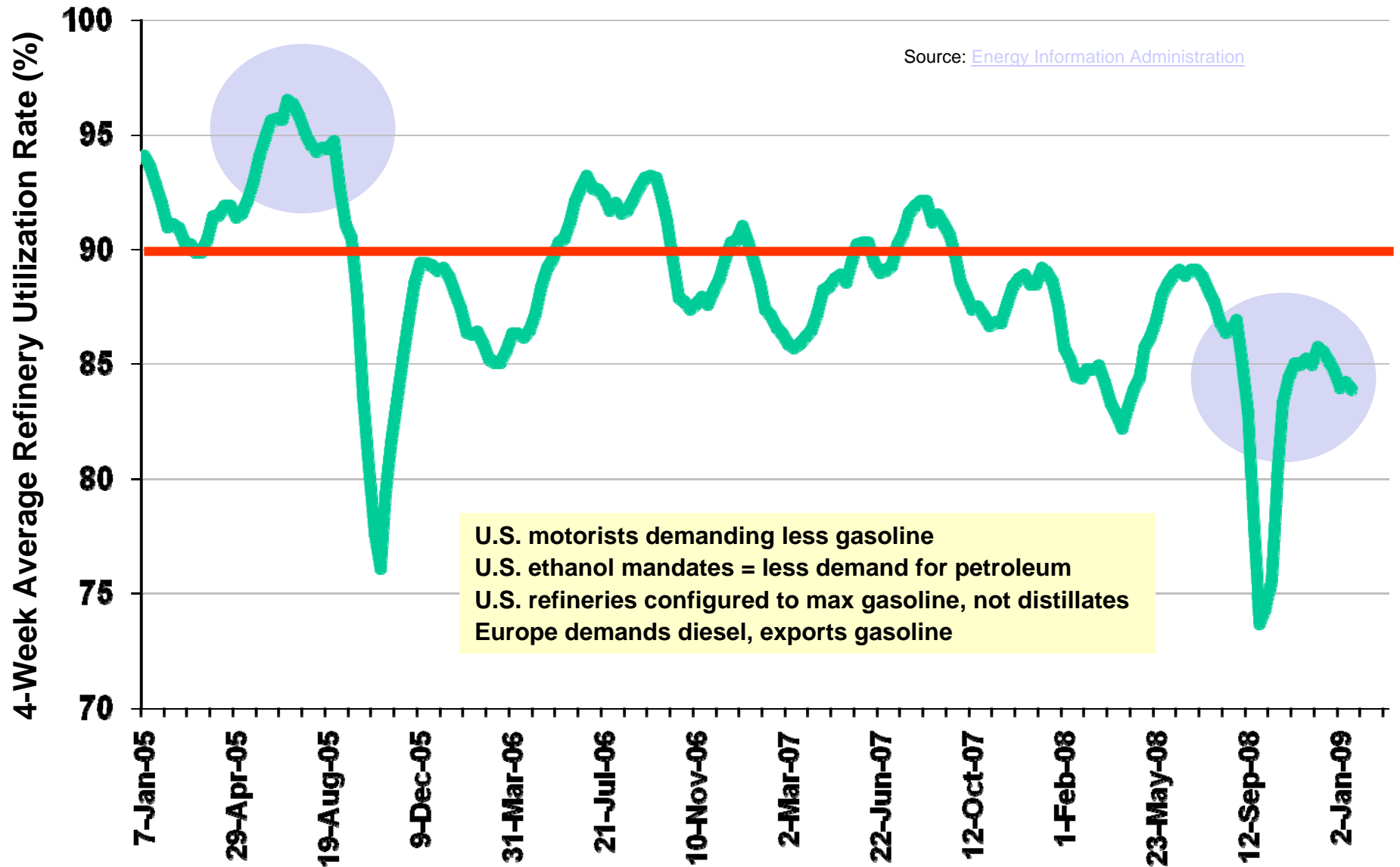
* Feedstock for high-octane gasoline, petrochemicals and solvents

Sources: [Energy Information Administration](#) and [American Petroleum Institute](#)

** Includes heavy oils used as in industry, marine transportation, electric power generation

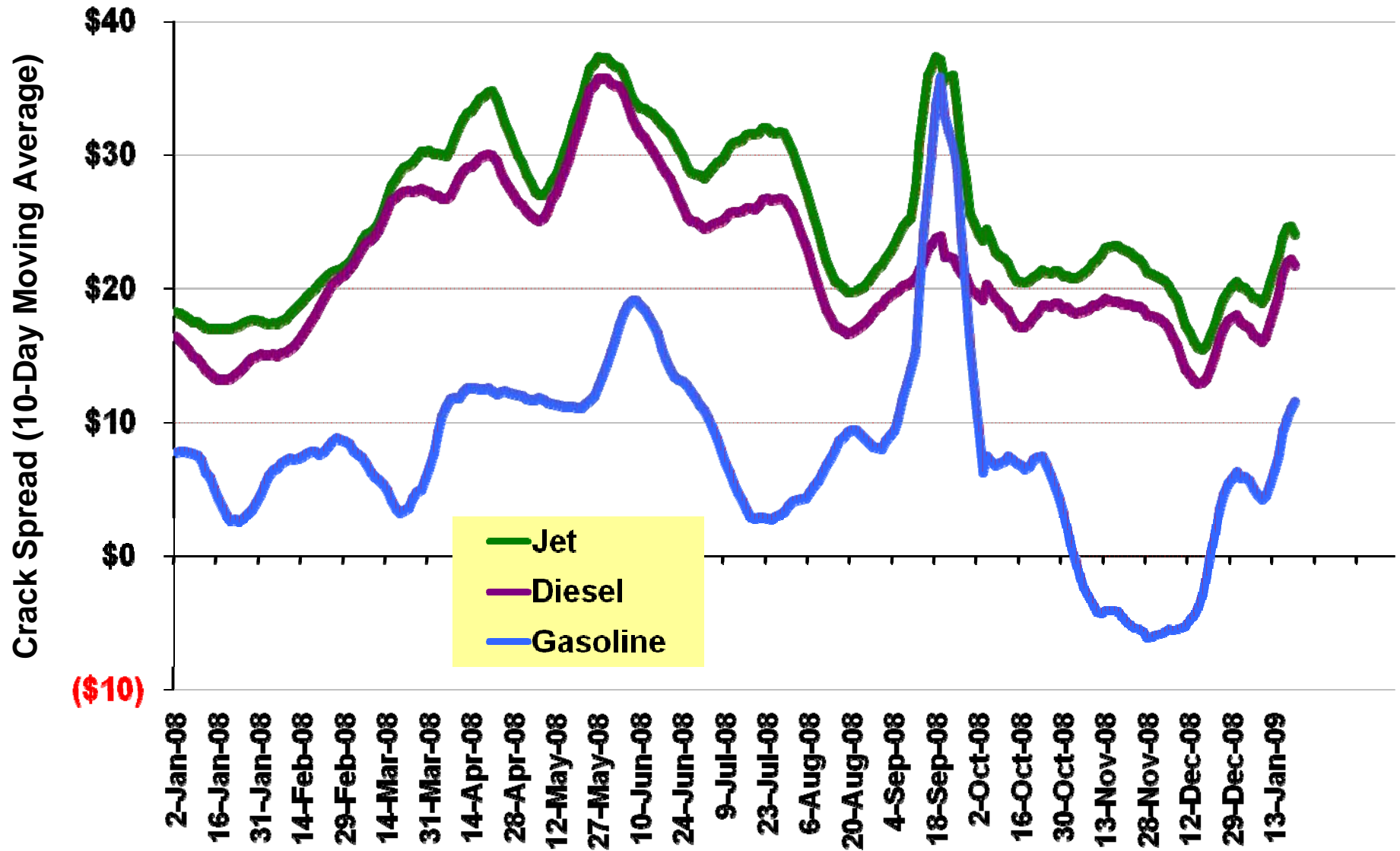
Refinery Utilization Consistently Below 90% in 2008

U.S. Refineries Responding to Weaker Gasoline Margins, Meaning Less Jet Output



Price of Jet Fuel Continues to Top Gasoline and Diesel

Key Factors Include U.S. Ethanol Mandates and Global Demand for Middle Distillates



Source: Energy Information Administration [Weekly Petroleum Status Report](#)

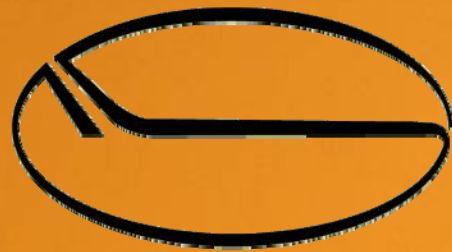
www.airlines.org

Why Market Alternative Fuels to Airlines?

- We are perhaps the most unified, committed buyer as an industry
- Unlike other transport modes, we have NO alternative – you'd be competing in a monopoly market desperate for new entry
- You know we will be using liquid fuels in our lifetimes
- With proper pricing incentives, individual carriers can do long-term contracts directly with producers, with floor prices, if necessary
- Jointly, airlines can enhance creditworthiness of contracts and simplify administration of large volumes
- Jointly, airlines can pay premiums for quality with no capital invested to segregate fuels
- Producers can make more money selling jet fuel than diesel

Bigger Premiums in Remote Locations

- Some airports with significant consumption face shortages and/or logistic constraints that drive up local prices
- Some locations with premiums of 10-30 cpg > USGC jet prices:
 - Boise / Salt Lake City / Denver / Albuquerque
 - Buffalo / Rochester / Toronto
 - Edmonton / Calgary
 - Coastal Southeast:
 - Jacksonville, Florida to Wilmington, N. Carolina
- Producers should consider more than feedstock costs when deciding where to locate facilities



AIR TRANSPORT ASSOCIATION

