

Distillate in Depth – The Supply, Demand, and Price Picture

John Hackworth

Joanne Shore

Energy Information Administration

Winter Fuels Conference

October 12, 2005

Distillate and Gasoline Relationships -- Temporary or Fundamental Change?

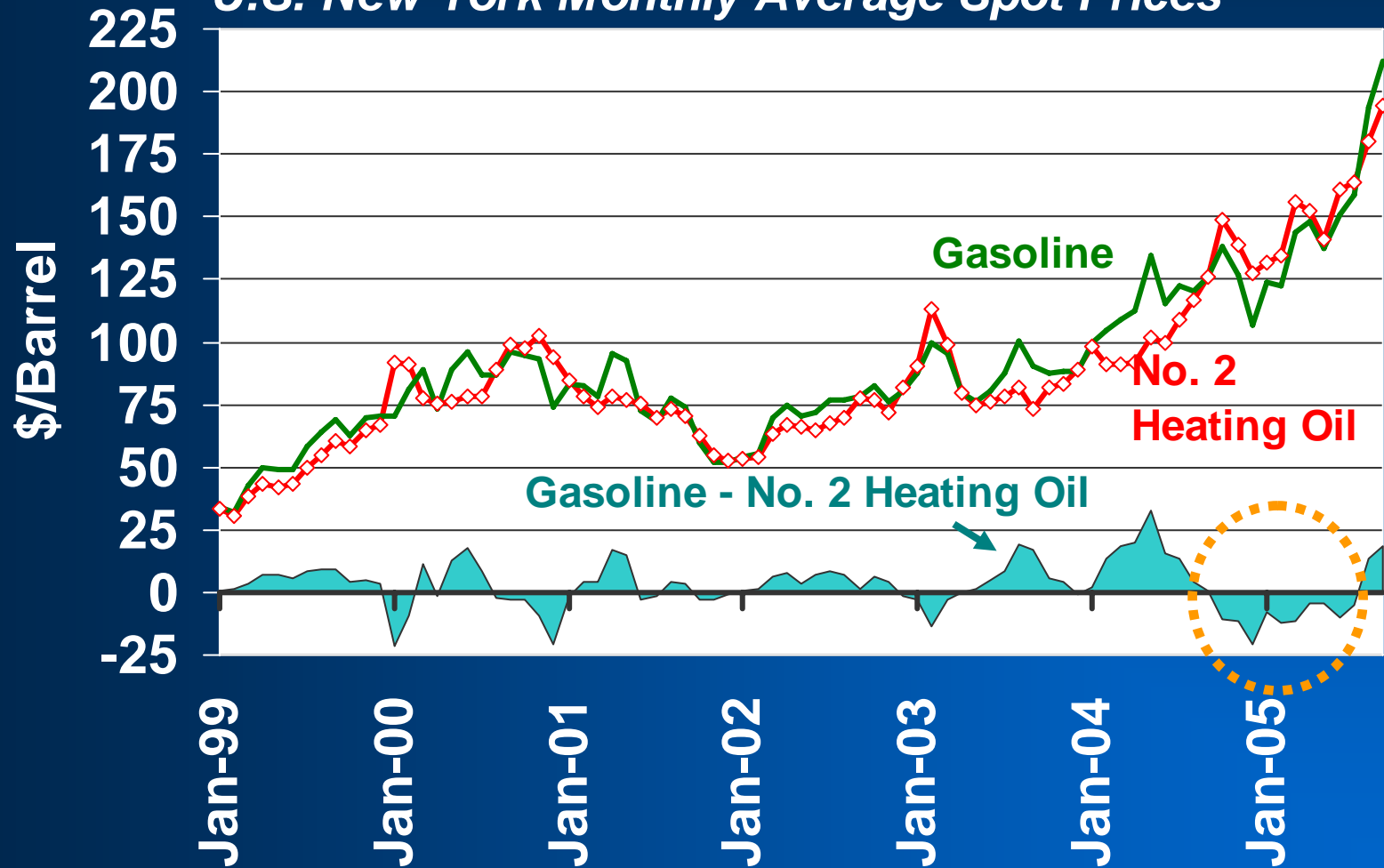
 Unusual distillate and gasoline prices in 2005 –
Not just a U.S. issue

- Explore Europe/US light product supply/demand balance to illustrate market dynamics
 - Europe's product imbalance
 - U.S. product imbalance
 - How they fit together
- Current distillate market and supply response

2005: Continuation of High Product Prices – Especially Distillate

Prices – Especially Distillate

U.S. New York Monthly Average Spot Prices



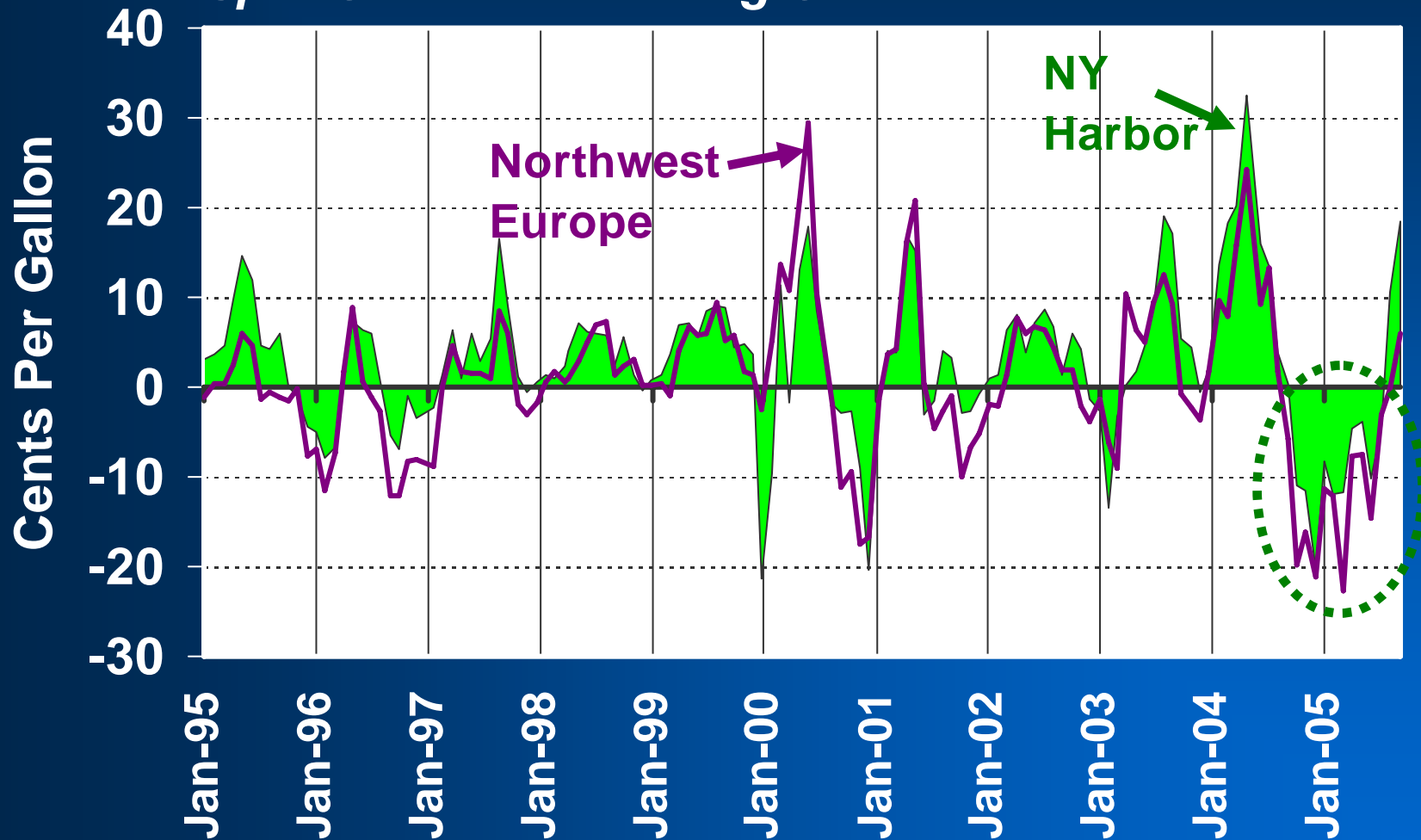
Note: Gasoline is conventional regular

Source: Bloomberg



Unusual 2005 Distillate Prices Internationally

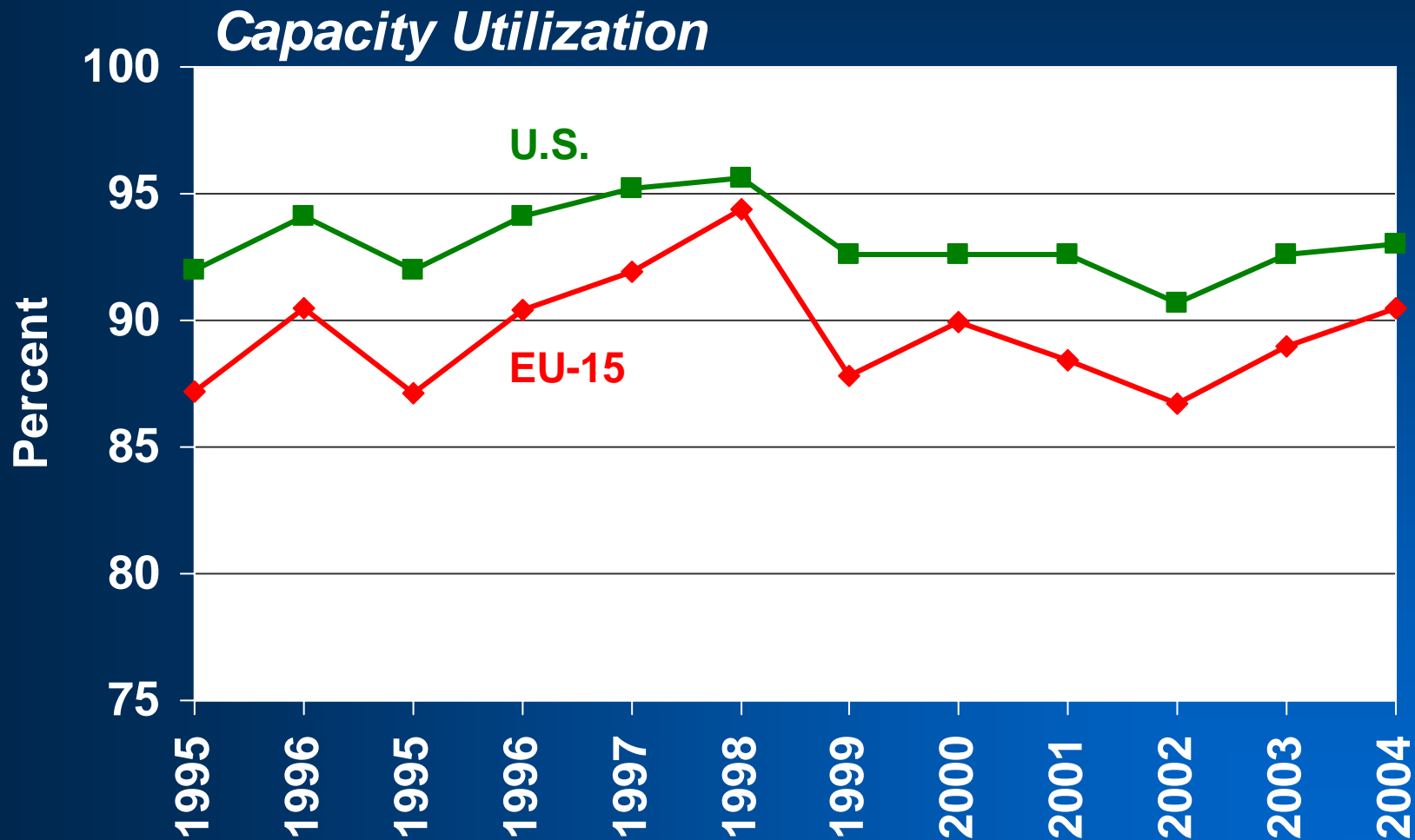
Spot Gasoline - Heating Oil Price Differences



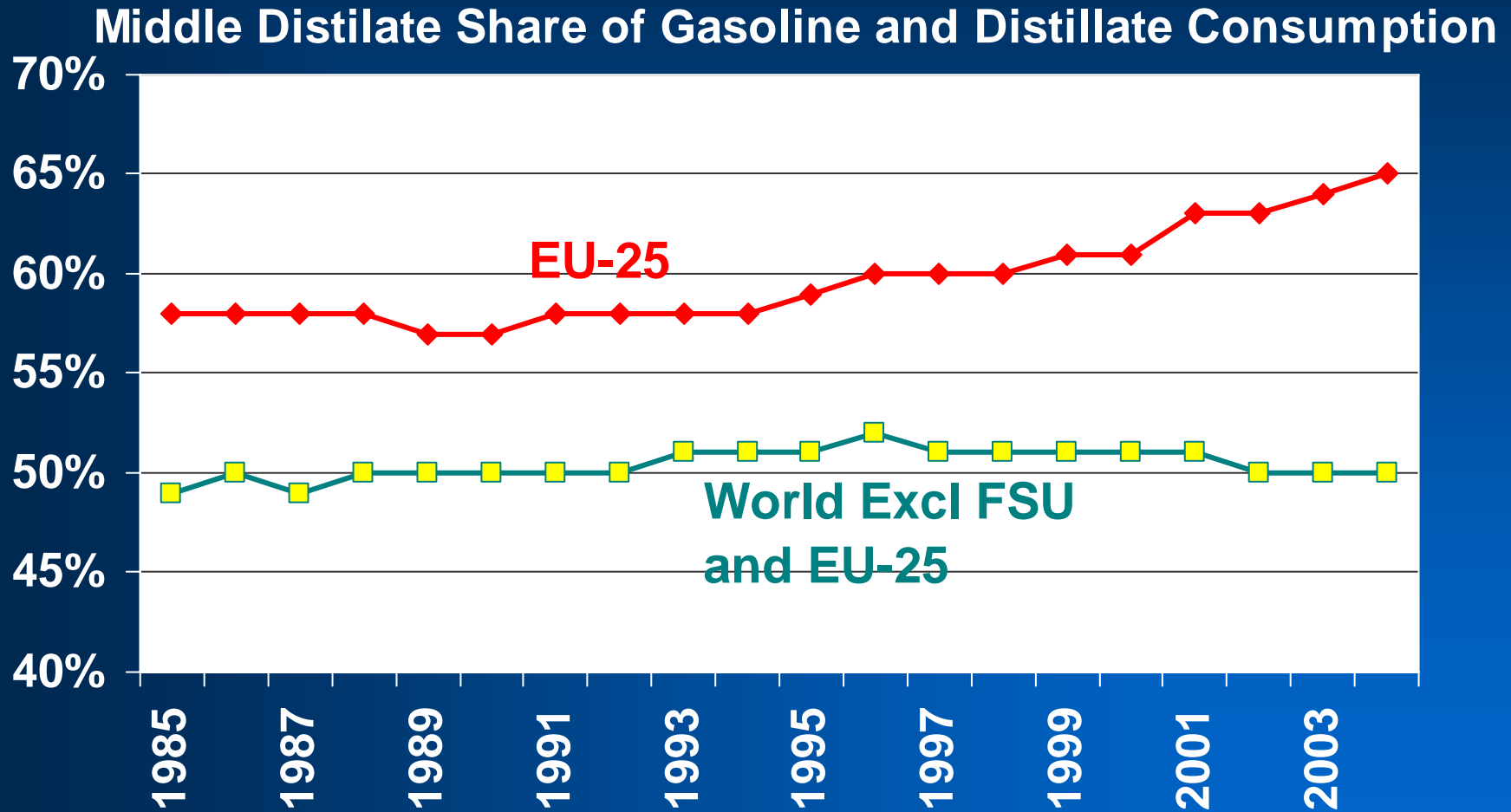
Source: Bloomberg NY Conventional Gasoline, No. 2 Heating Oil; NW Europe 0.2% Heating Oil and Regular Gasoline



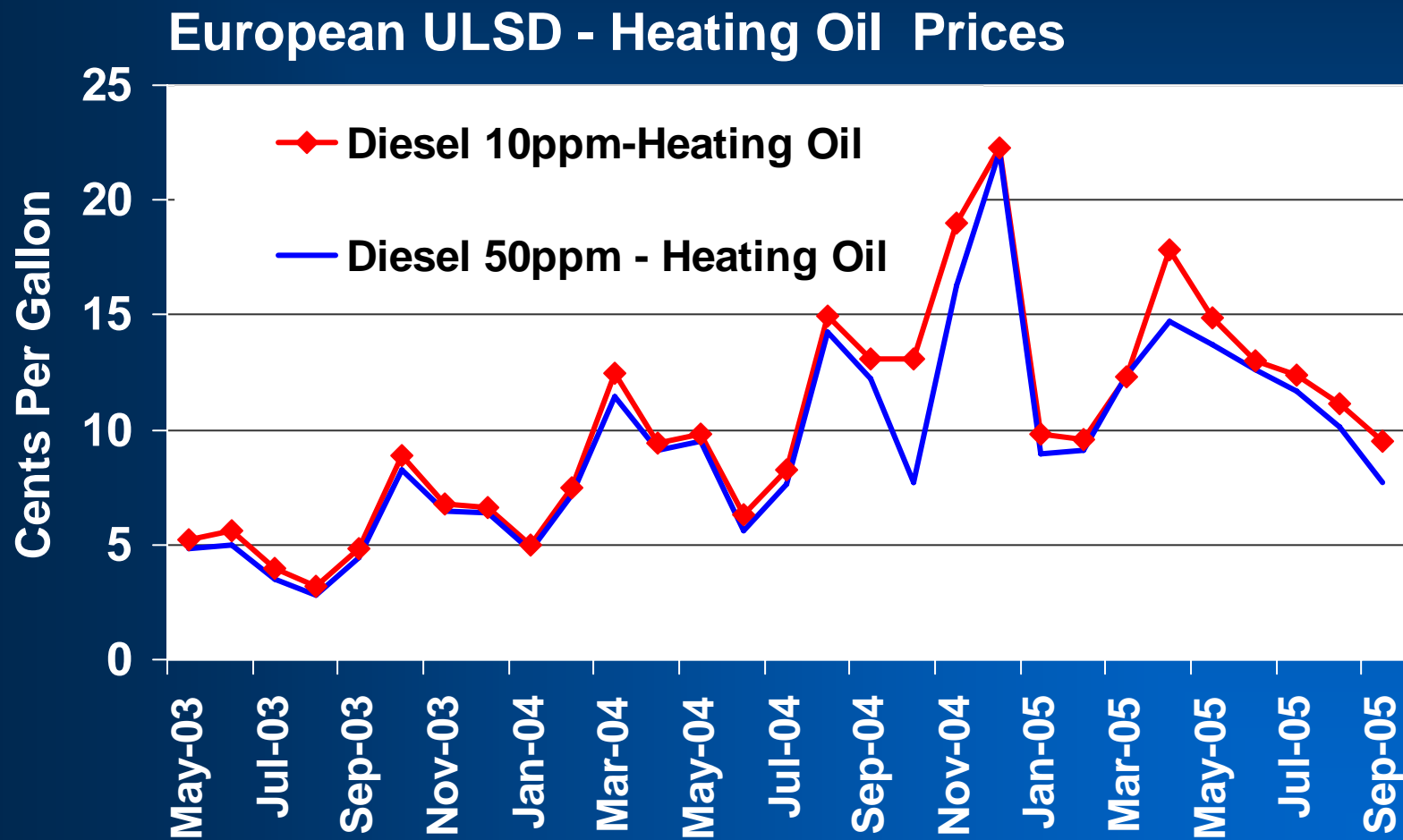
Atlantic Basin 1995-2004 Business As Usual



Europe Is Unique In Degree of Shift to Middle Distillate



EU's Contribution: Price is Not Just About Volumes, But Quality As Well



Source: Bloomberg NWE Barge



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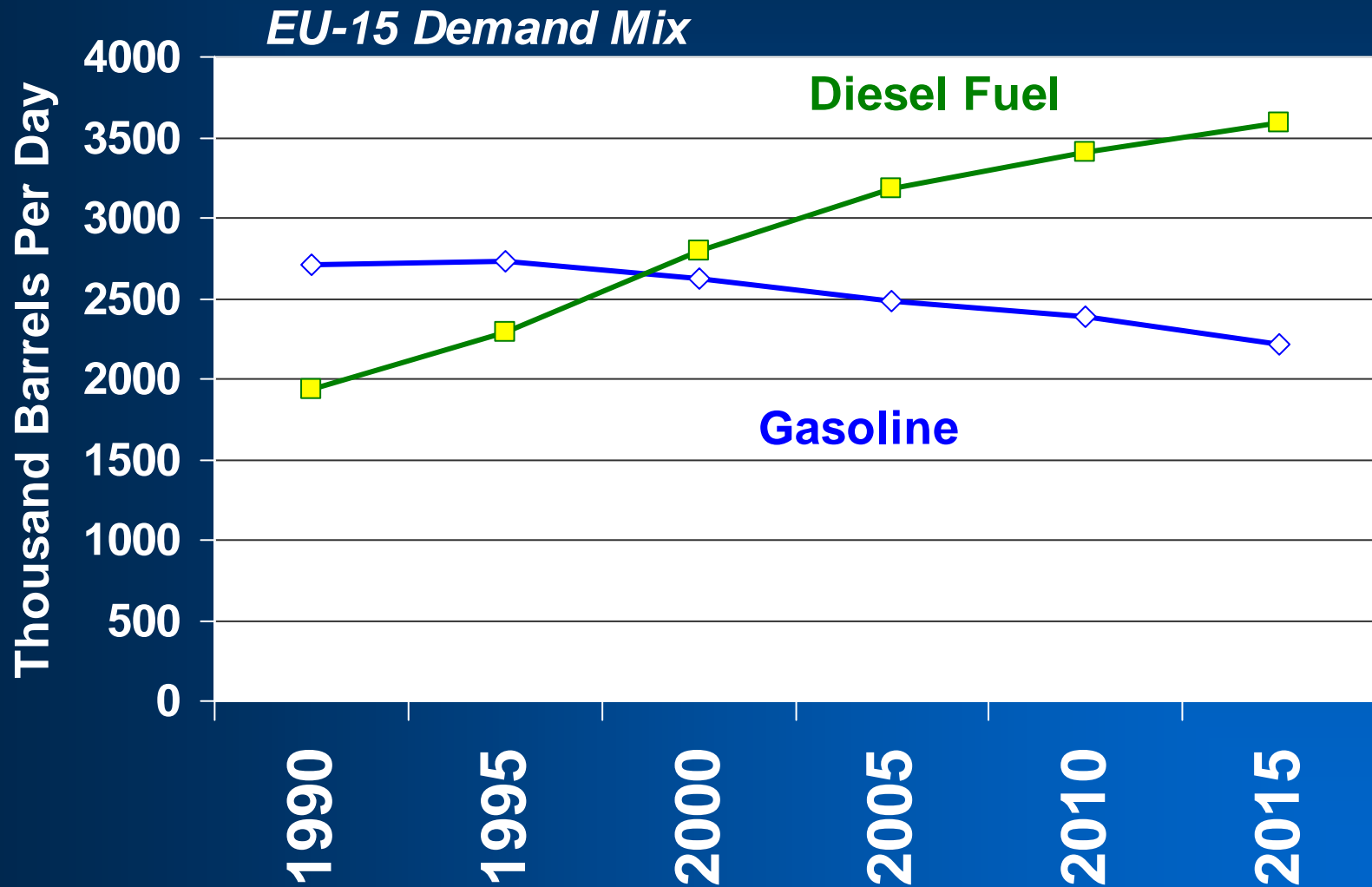
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Europe and the U.S. – Example of International Product Trade

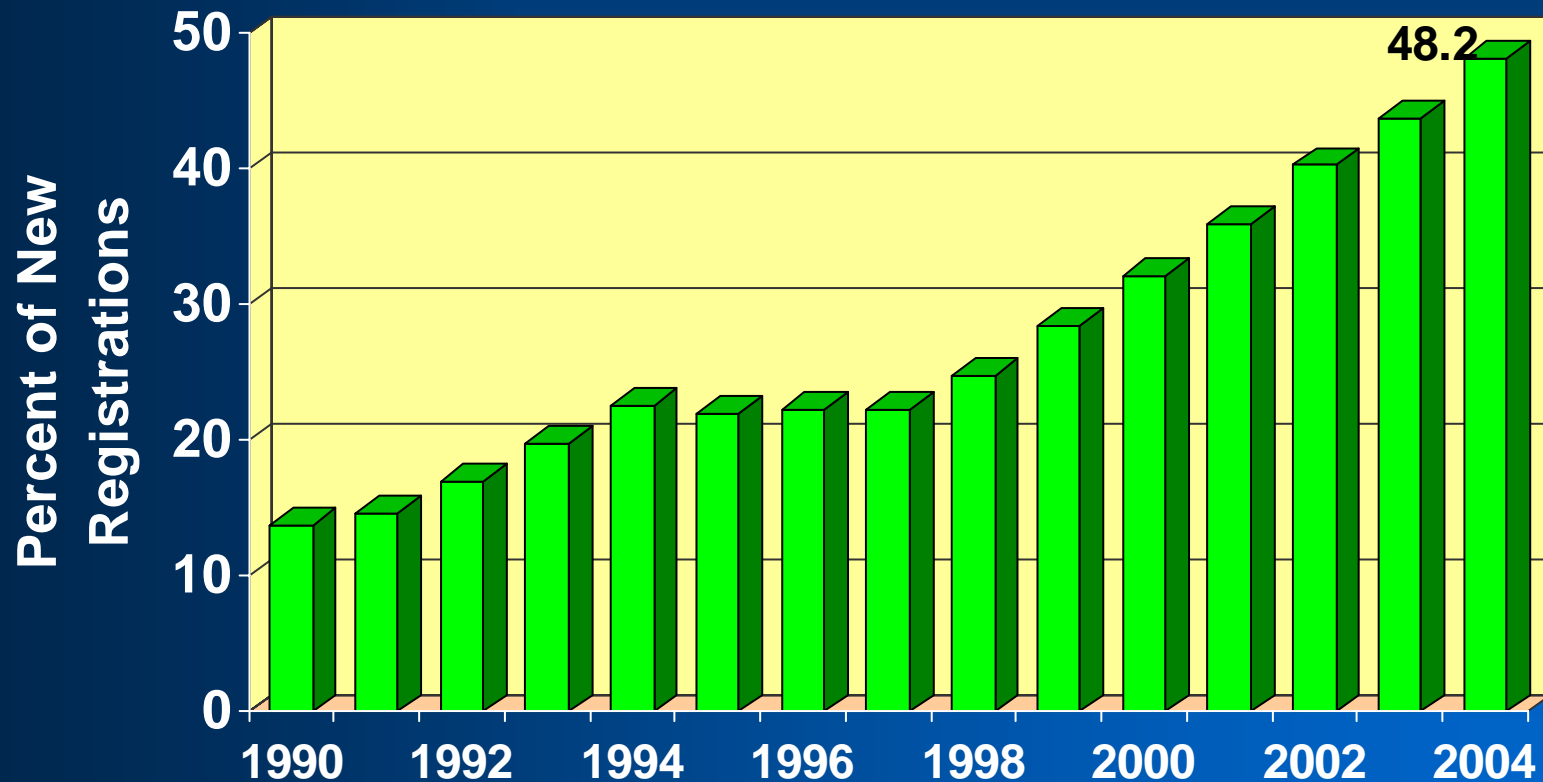
- We know the U.S. depends on product imports – especially those from Europe
- Product trade between Europe and U.S has increased from 1995 to 2005
- Working together because it benefits both due to different supply/demand balances
- Distillate product supply concerns may grow more for EU, but impacts U.S.
- Product quality issues important -- but not part of this presentation

EU-15 Demand Mix Projected to See Declining Gasoline Demand



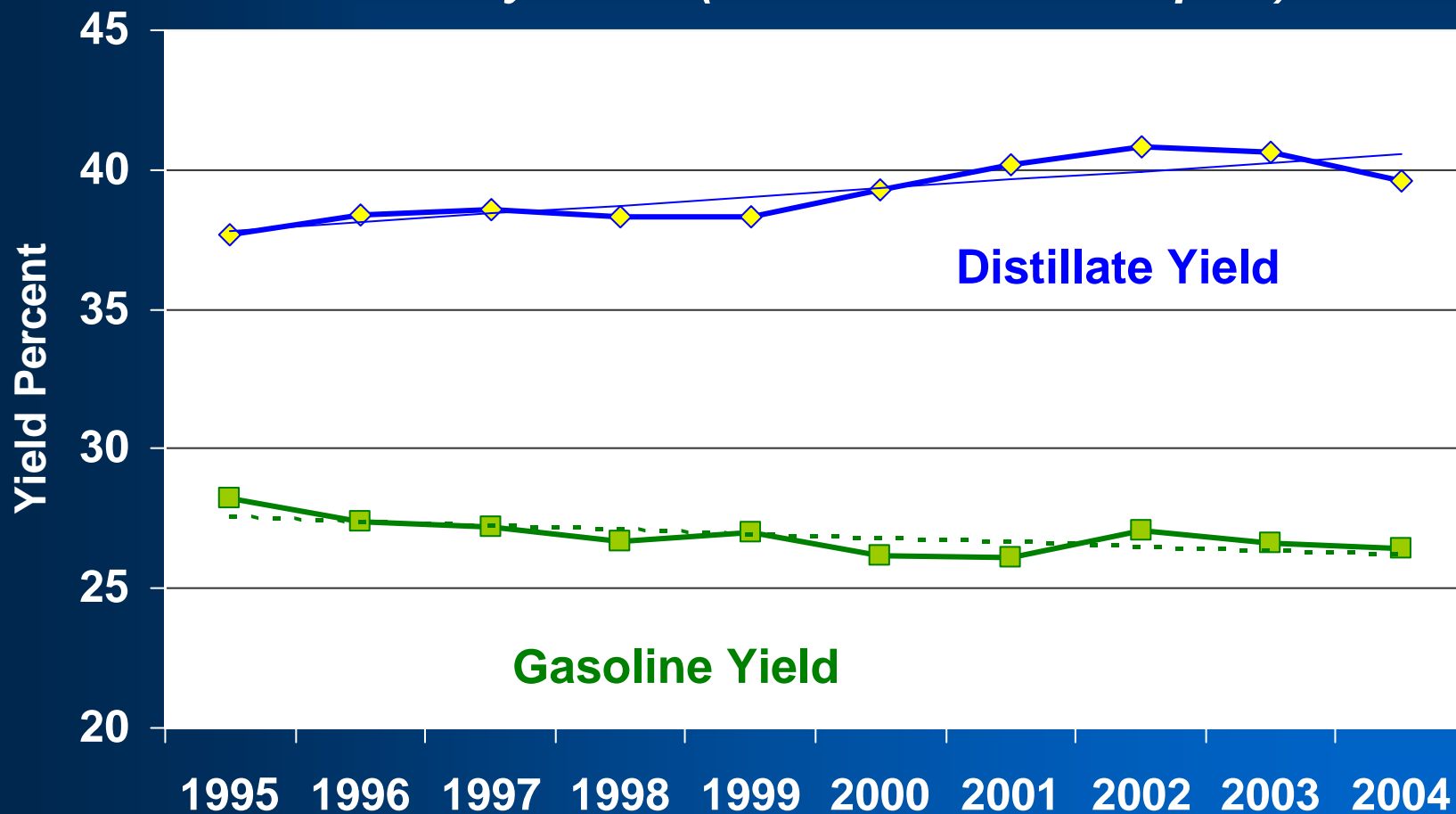
European Preference for Diesel Grew Quickly since Late 1990s

W. Europe Diesel-Fueled Vehicle Share of New Passenger Car Registrations



EU Distillate Refining Yield Growing as Gasoline Yield Shrinks

EU-15 Refinery Yields (Production/Crude Inputs)

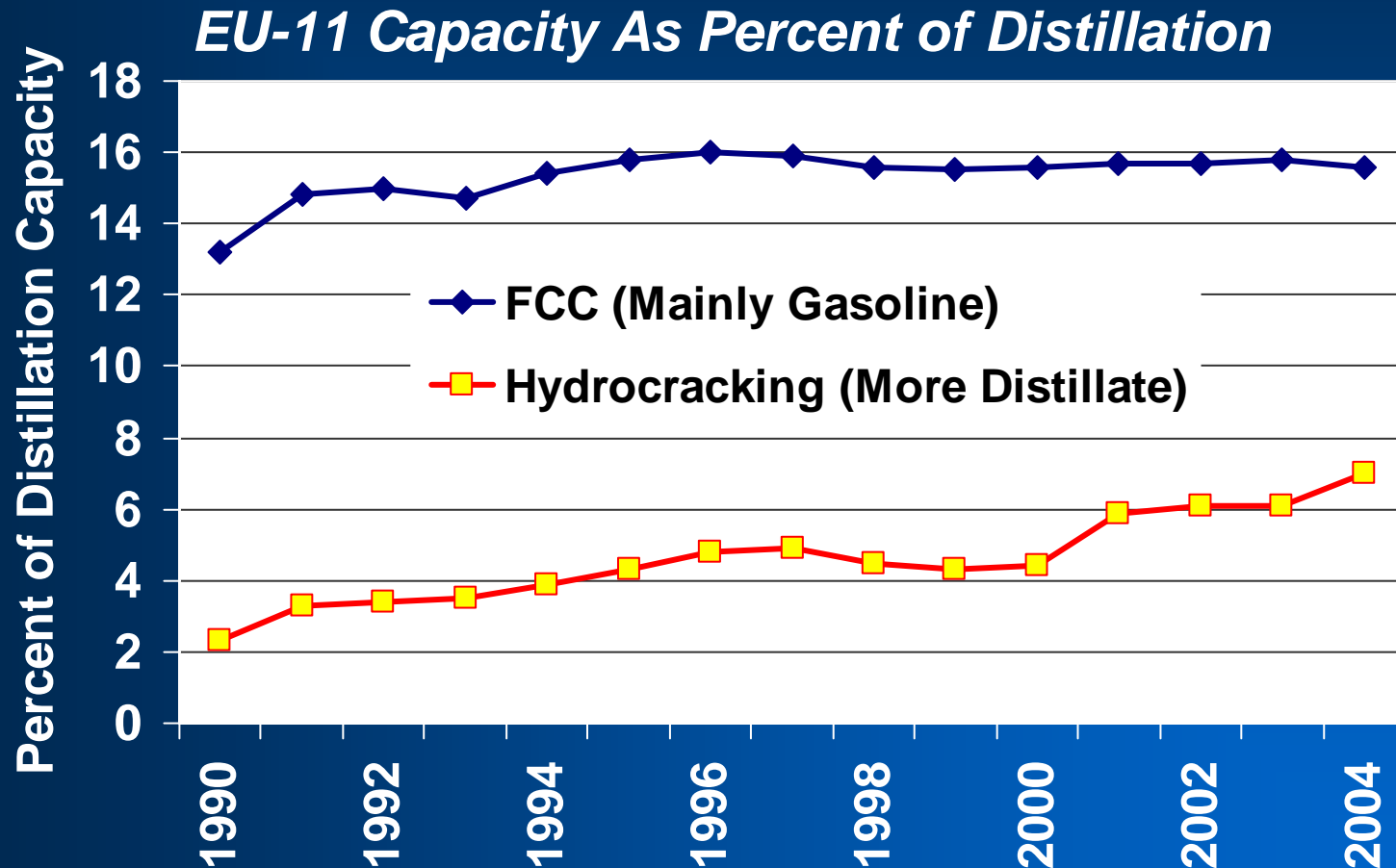


Note: Distillate is heating oil and diesel.

Source: IEA



EU Hydrocracking Growing, But Not as Fast as Diesel Demand Shift

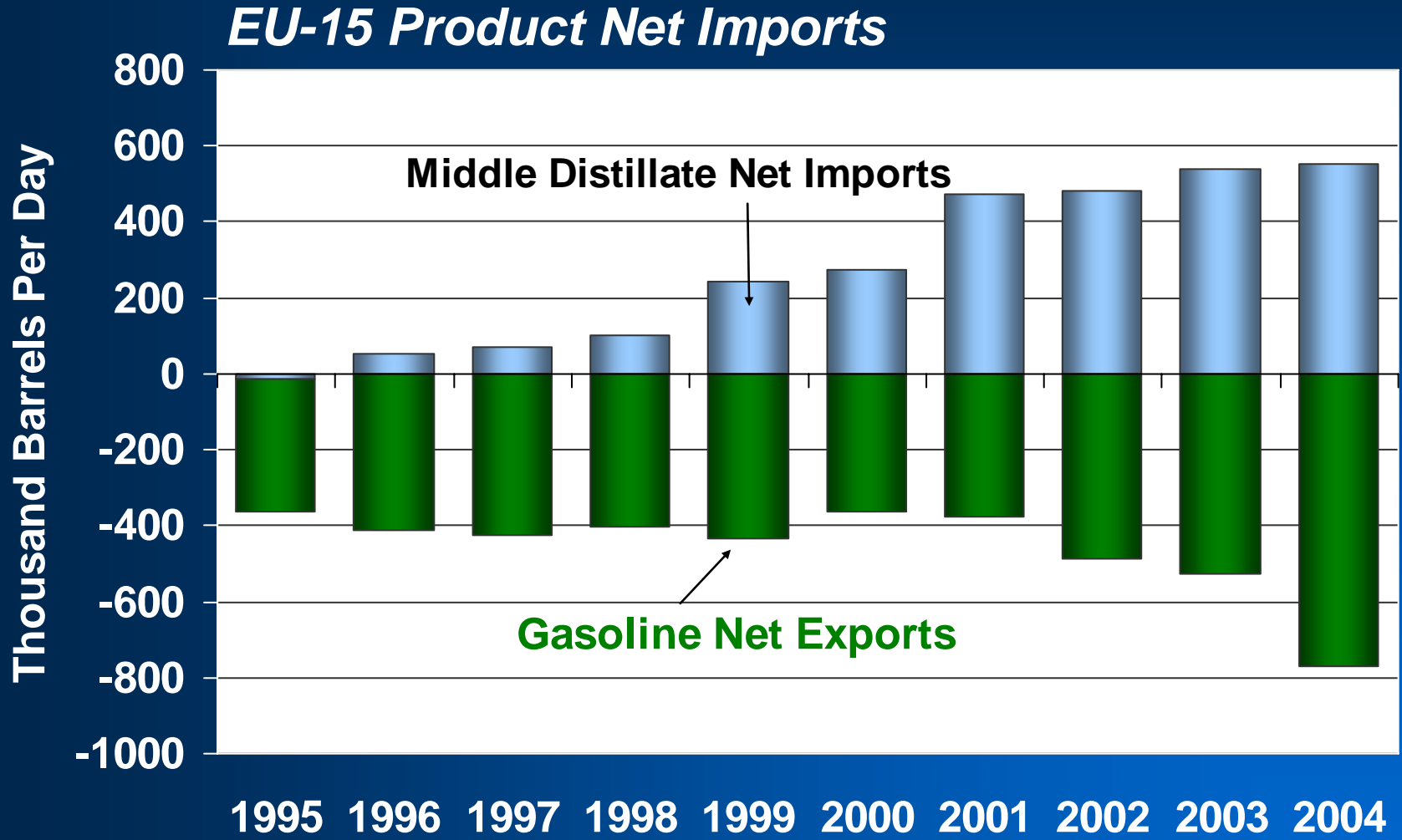


Note: FCC - Fluid Catalytic Cracking

Source: EIA, Oil and Gas Journal



Europe's Growing Product Imbalance



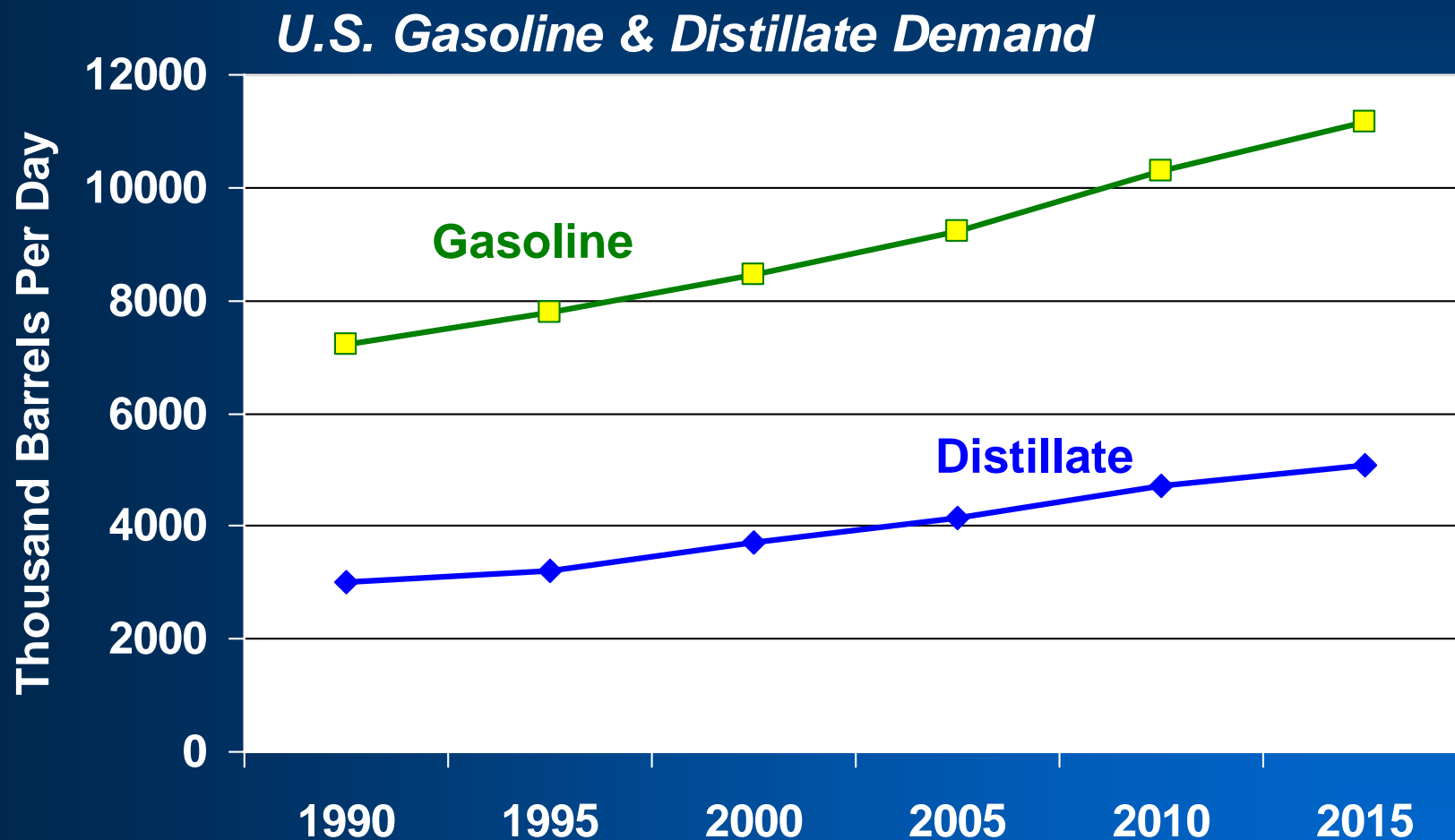
Europe Using Imports and Exports to Balance Product Supply: 1995-2004

- Diesel/gas oil imports increased 400 MB/D with 3/4 from Former Soviet Union
- Kero/Jet imports rose 200 MB/D with 56% from Middle East
- Even with large distillate imports, had to export about 400MB/D gasoline to balance
- Three quarters of gasoline exports went to U.S. and 10% to Africa

Europe: 1995-2004 -- Summary

- Diesel demand growing and gasoline demand declining
- European refiners production mix -- too much gasoline, too little diesel
- Hydrocrackers being built to increase diesel yield, but not keeping up with demand shift
- Historically, Europe achieved balance by finding economic import sources for distillates and export destination for gasoline
- Future: Still see increasing gasoline exports for some time – but will economic distillate imports be available – especially ULSD imports?

U.S. Demand Growing for Both Gasoline and Distillate

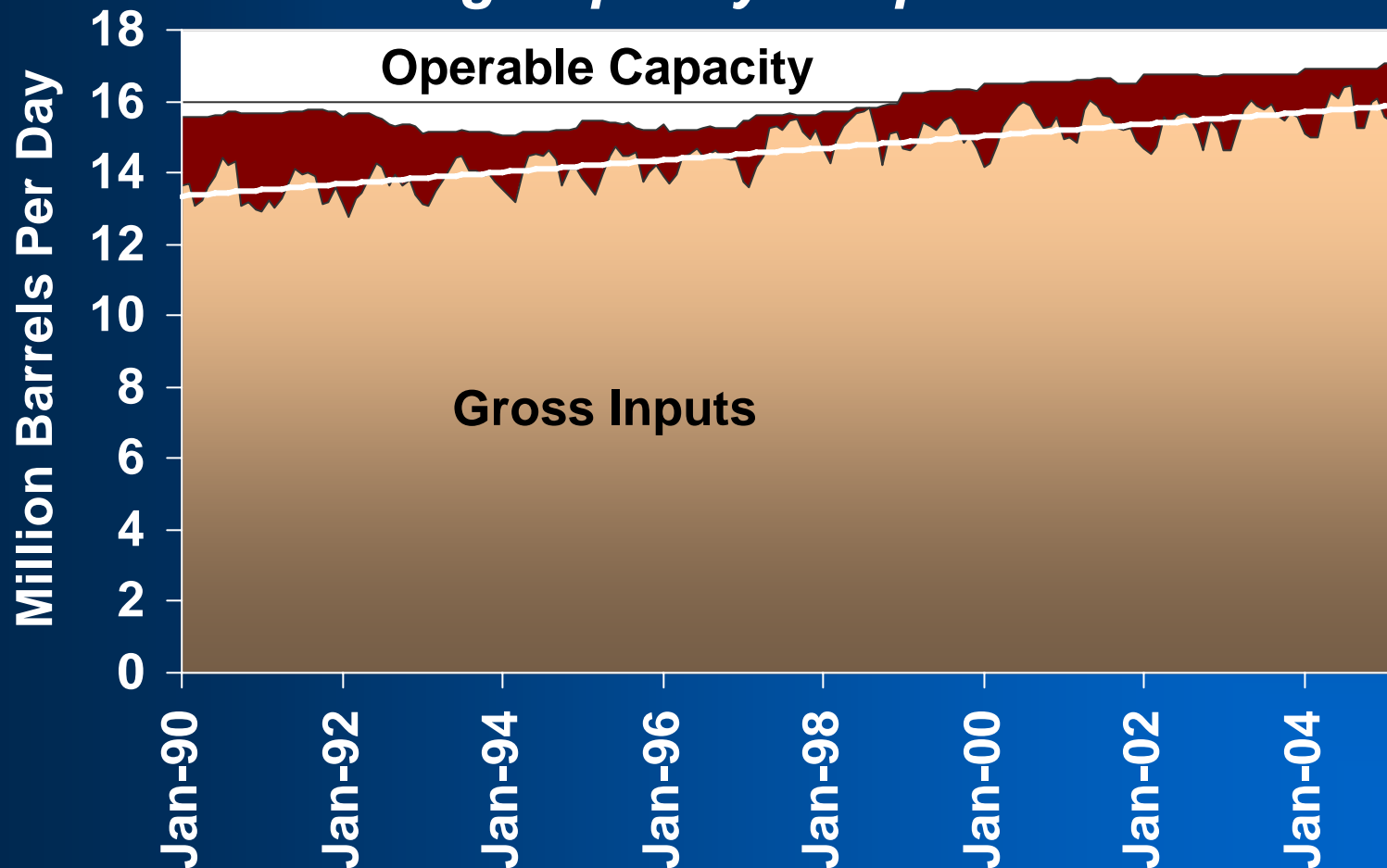


Source: EIA, Annual Energy Outlook 2005

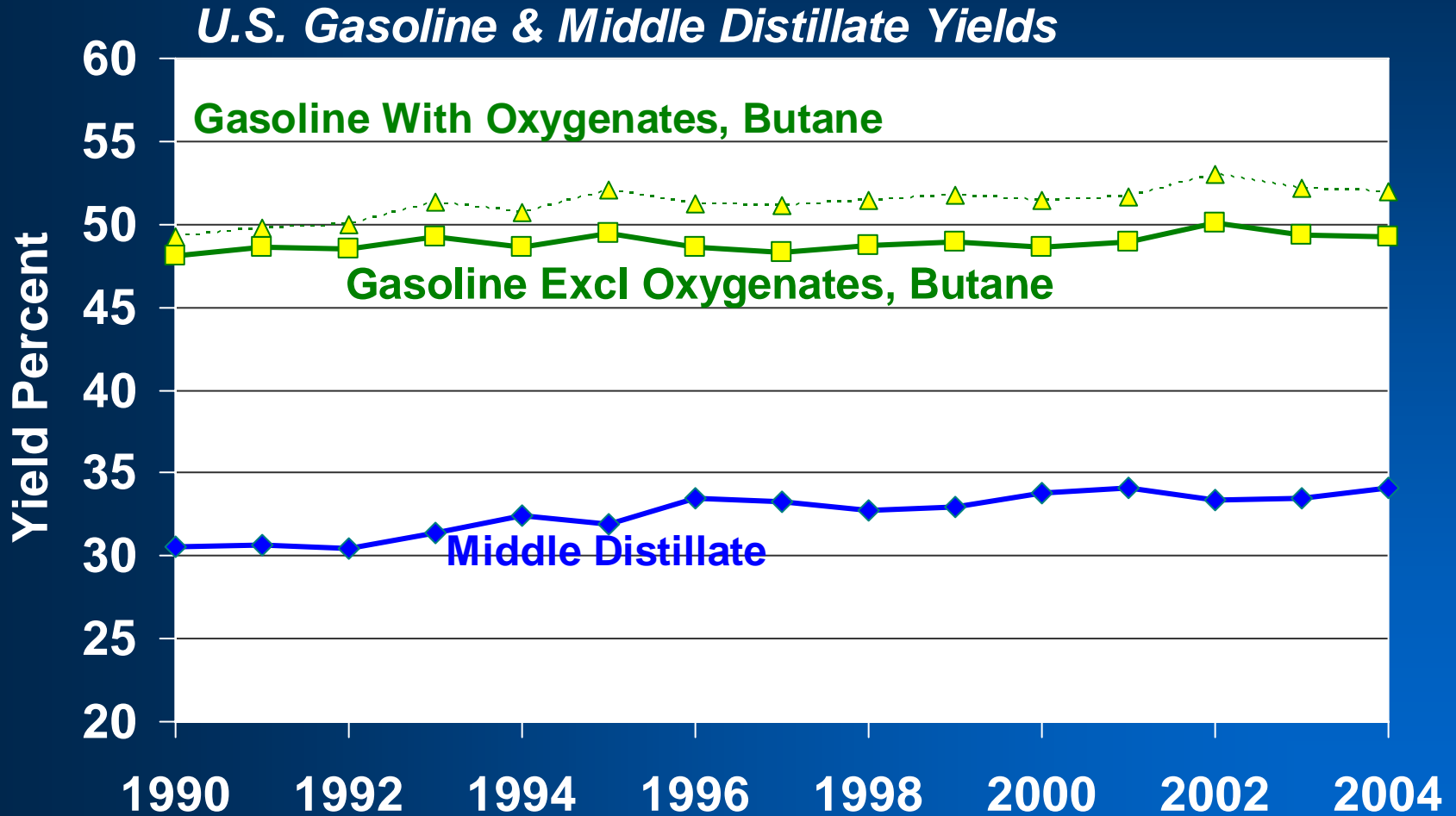


U.S. Refinery Throughput Has Increased to Help Meet Demand

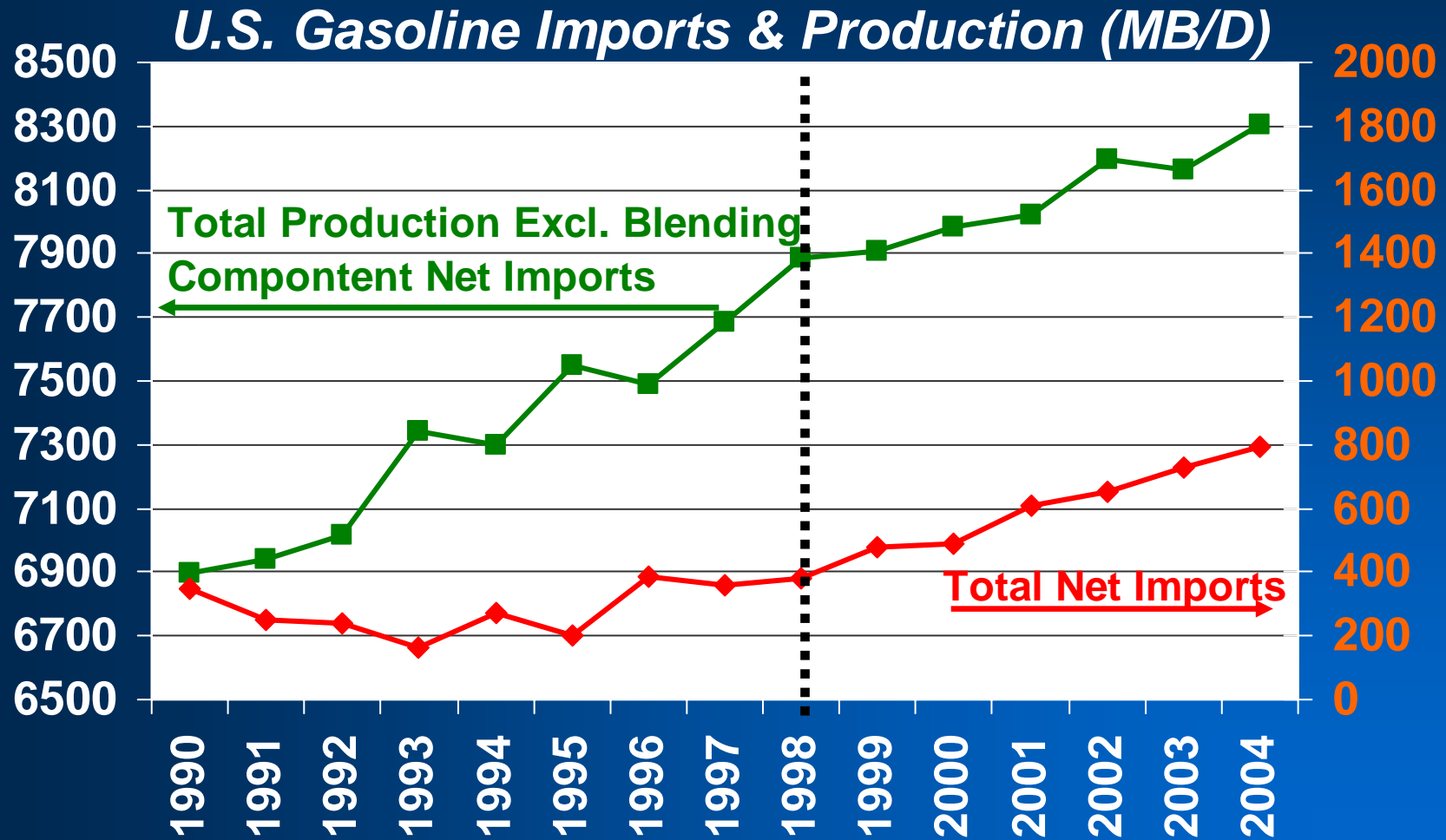
U.S. Refining Capacity & Inputs



U.S. Middle Distillate Yield Has Increased While Gasoline Stayed Flat



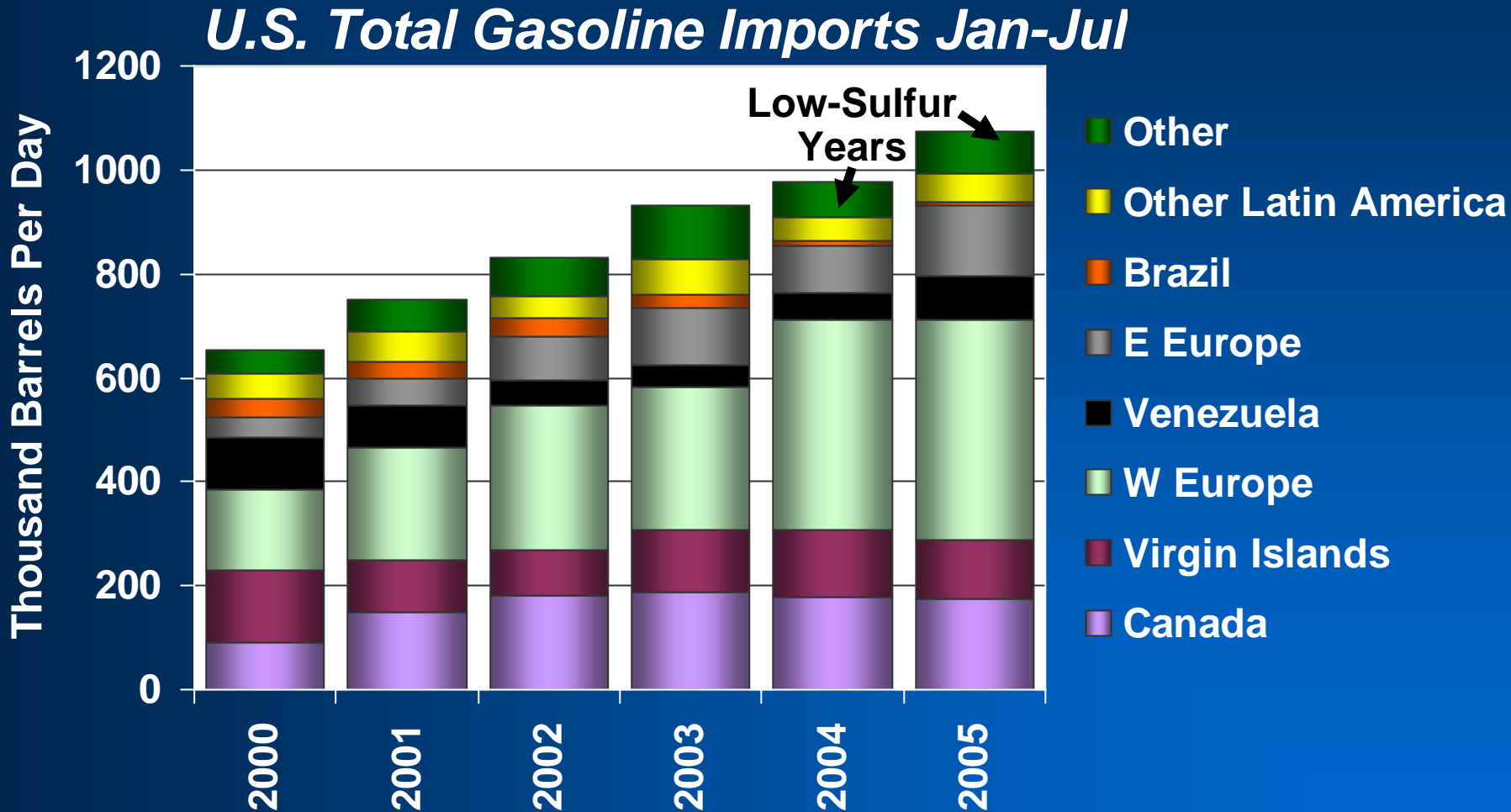
Gasoline Imports Have Supplied Half Demand Growth in Recent Years



Gasoline Import Sources

- **Nearby dedicated suppliers**
 - Canada
 - Virgin Islands
 - Venezuela
- **Nearby economic sources**
 - Western Europe – symbiotic relationship
 - Eastern Europe
 - Latin America
 - Africa
- **Other incremental supply**
 - Middle East and Asia

Western Europe Growing Source of Gasoline Imports



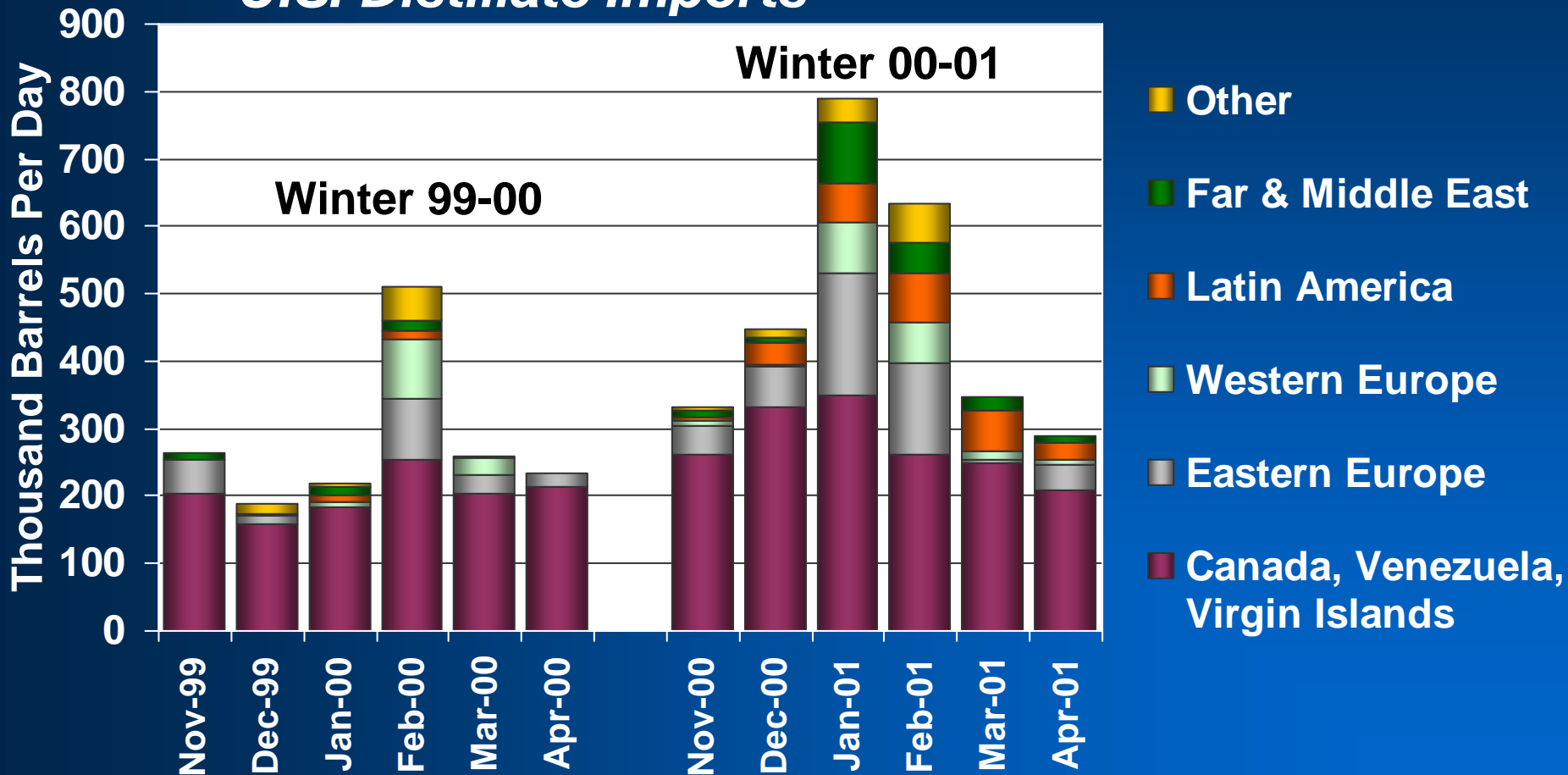
Note: Total gasoline is finished product plus blending components.

Source: EIA, Form EIA-814



Distillate Imports Become Critical During Cold Snaps: Relief from Different Locations

U.S. Distillate Imports

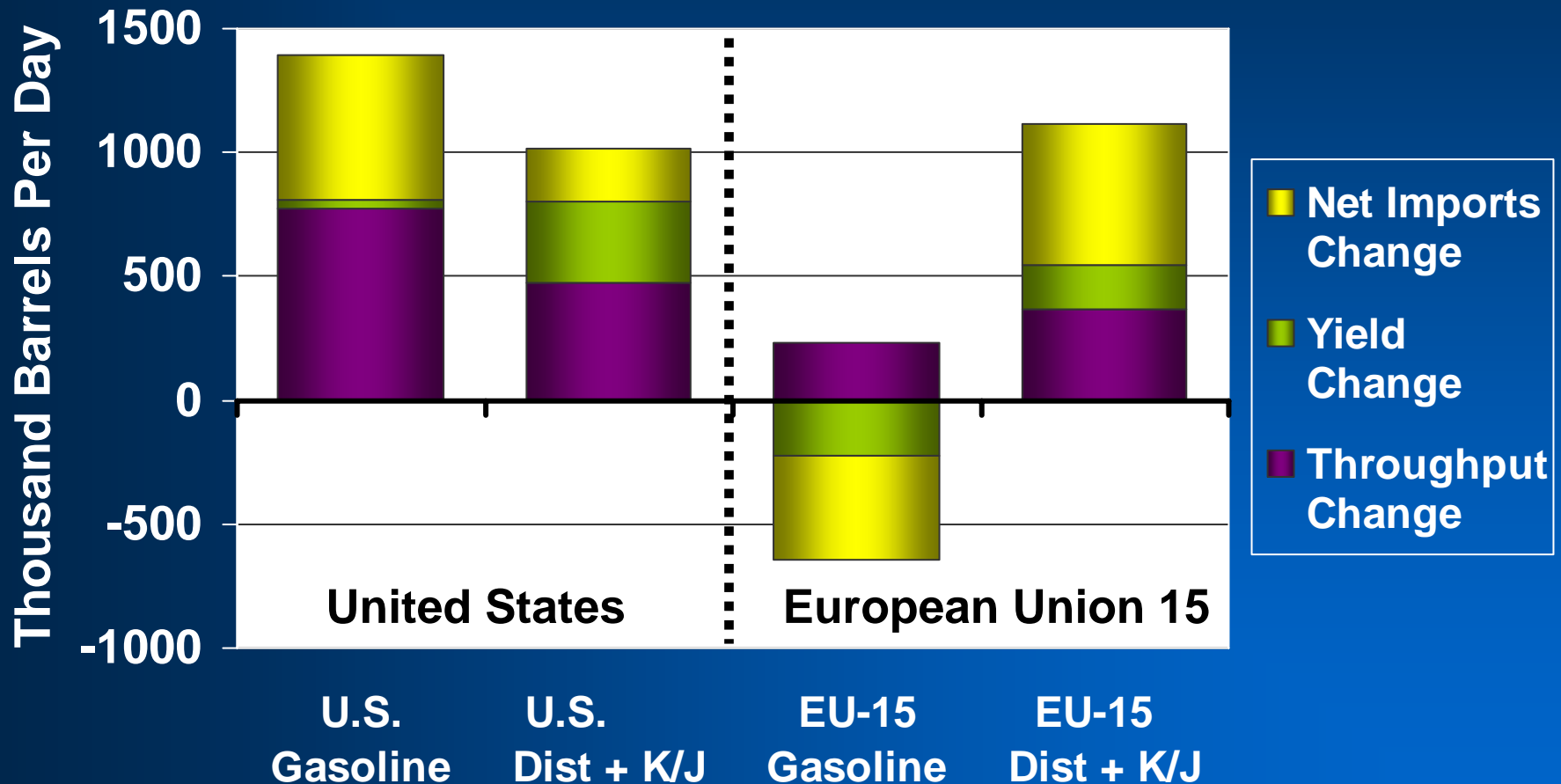


United States: 1995-2004 -- Summary

- **Gasoline:**
 - Gasoline demand growth met almost equally by increased throughput and increased imports
 - Europe is major source of increased gasoline imports
- **Distillate:**
 - Increase in distillate supply mostly from refinery production -- higher throughput and higher yield
 - However distillate imports are critical during unexpected cold snaps

Summary of European and U.S. Balances

How Added Demand Was Met: 1995-2004



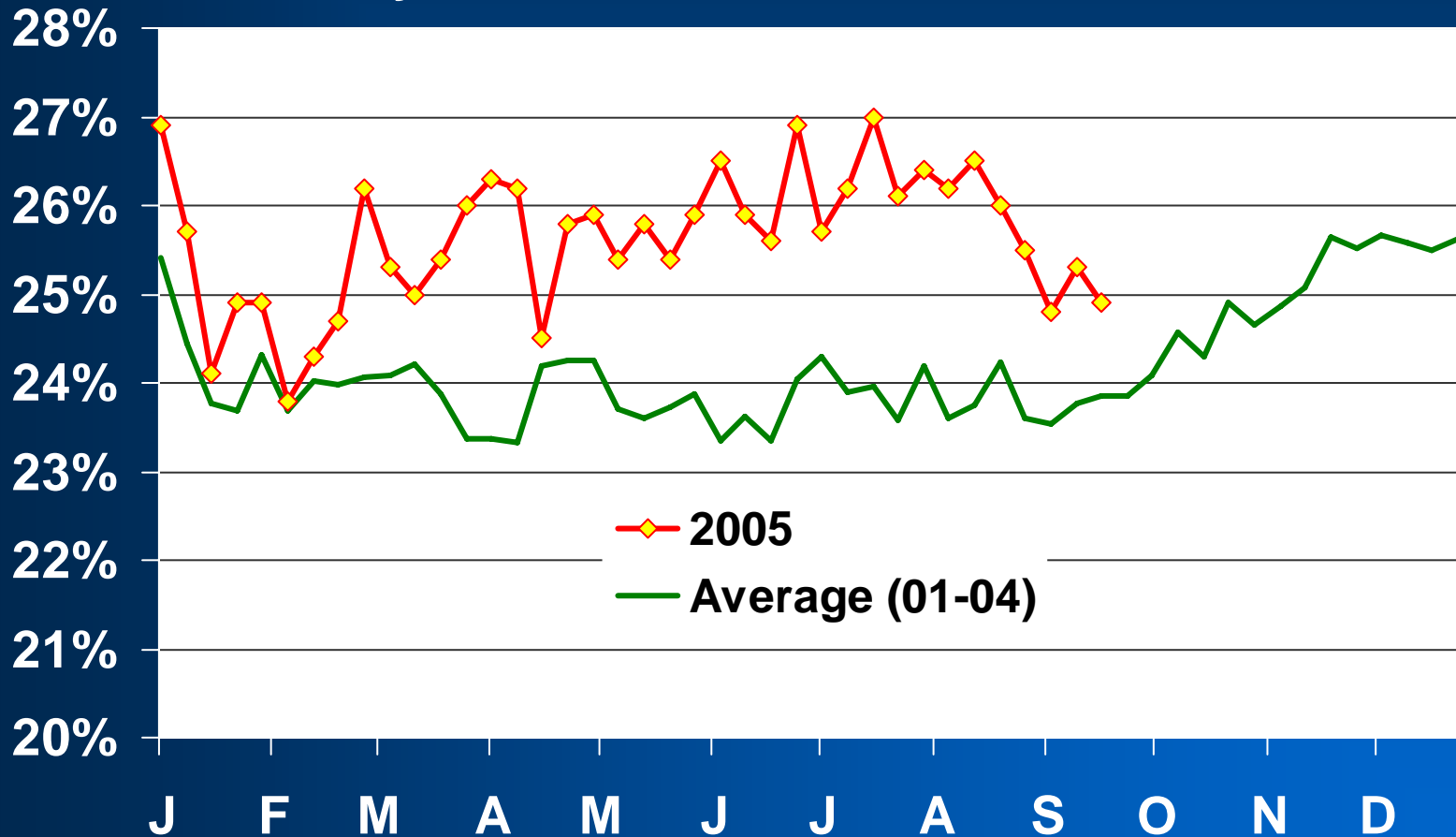
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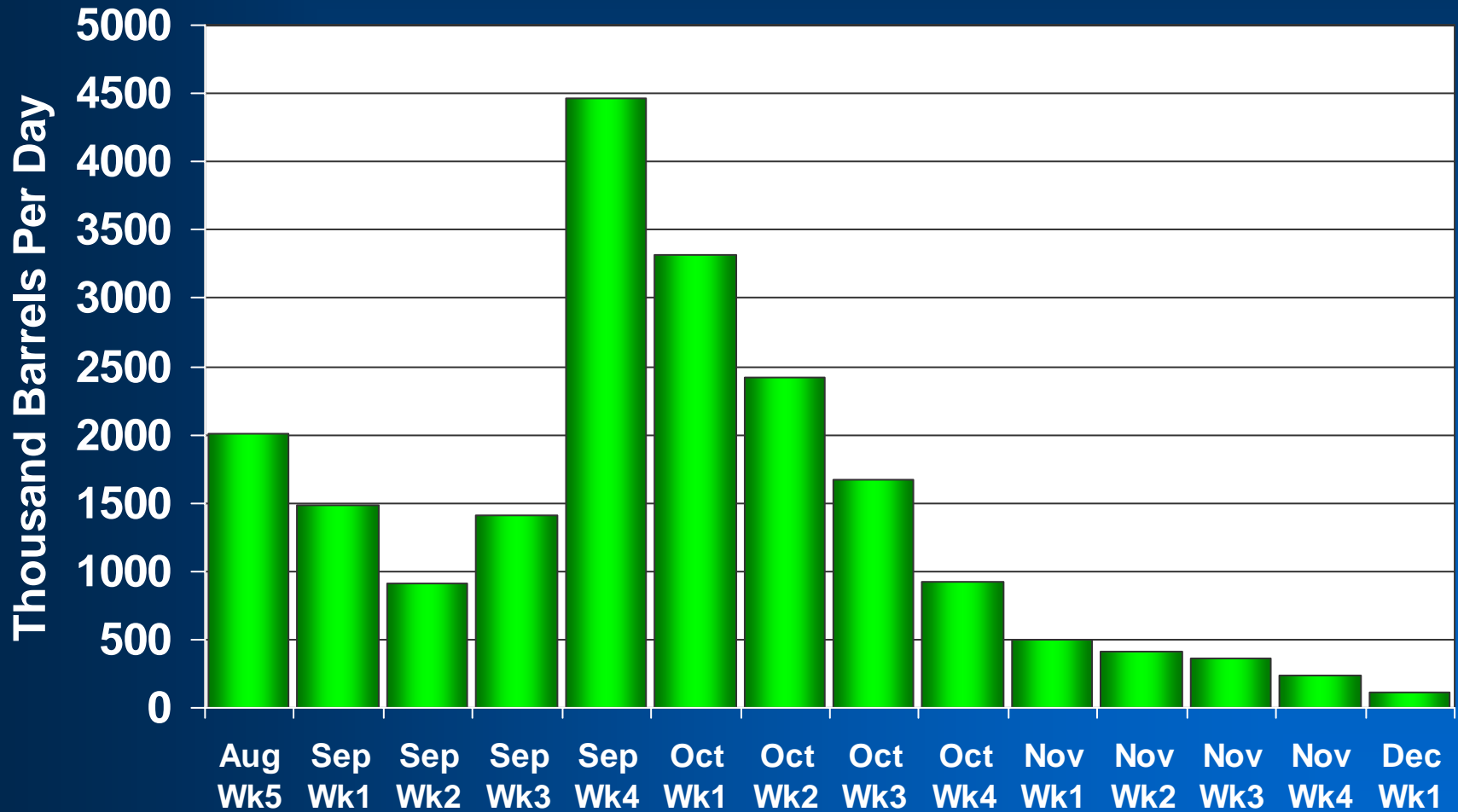
 Current distillate market and supply response

In Response to Price, U.S. Distillate Yields Have Been Unusually High

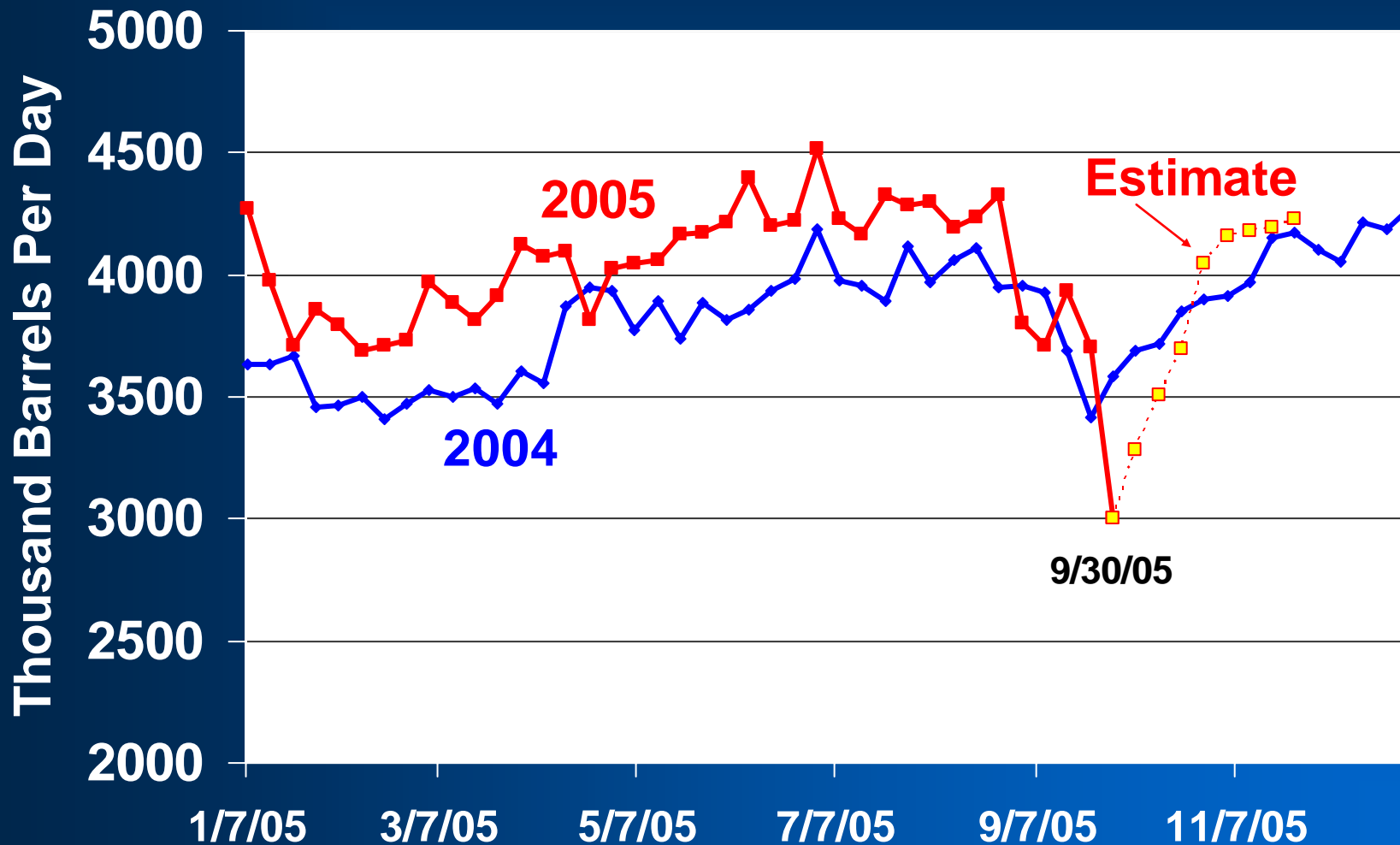
Weekly U.S. Distillate Yields



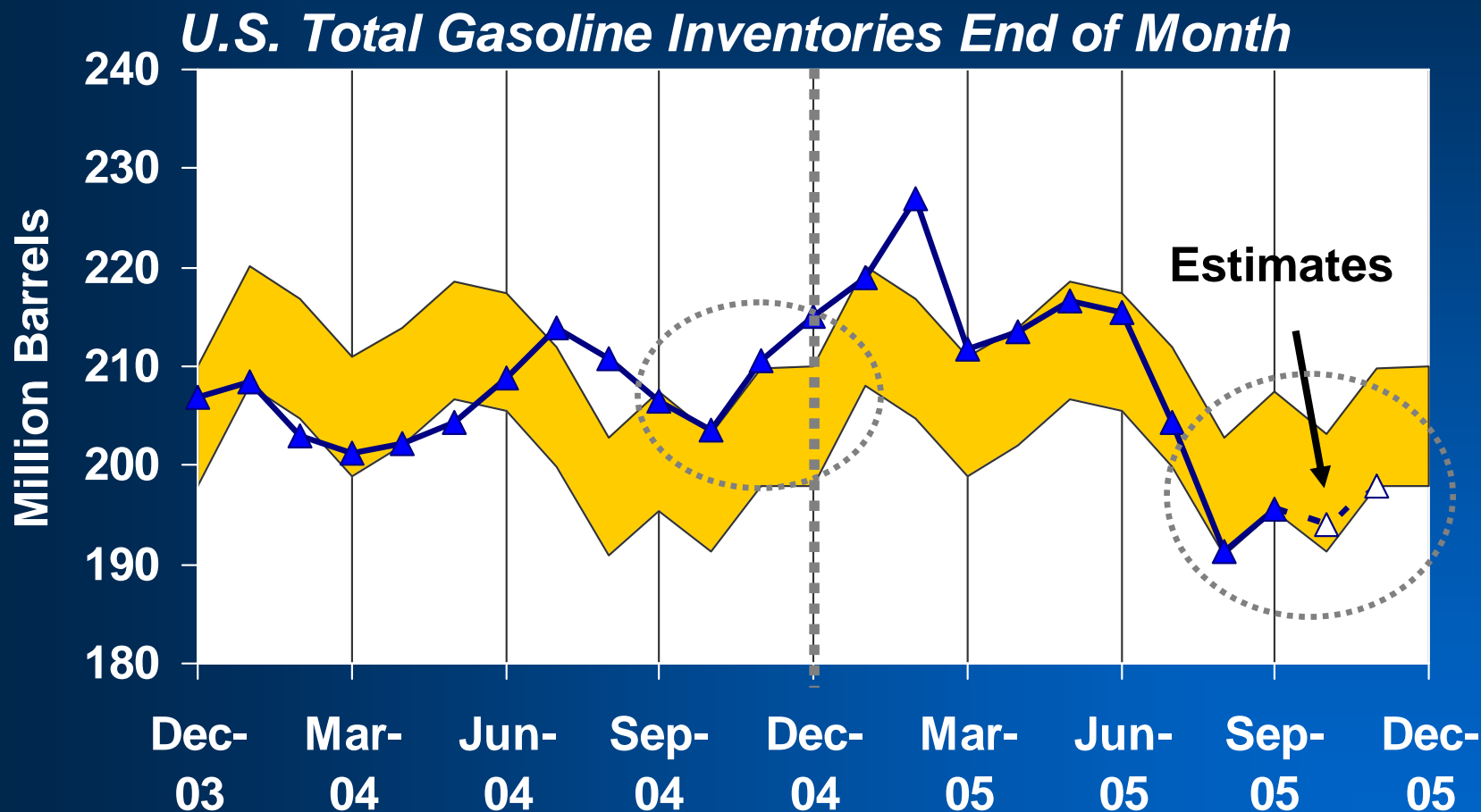
PADD 3 Estimated Lost Crude Refinery Input Volumes from Katrina and Rita



U.S. Weekly Distillate Production

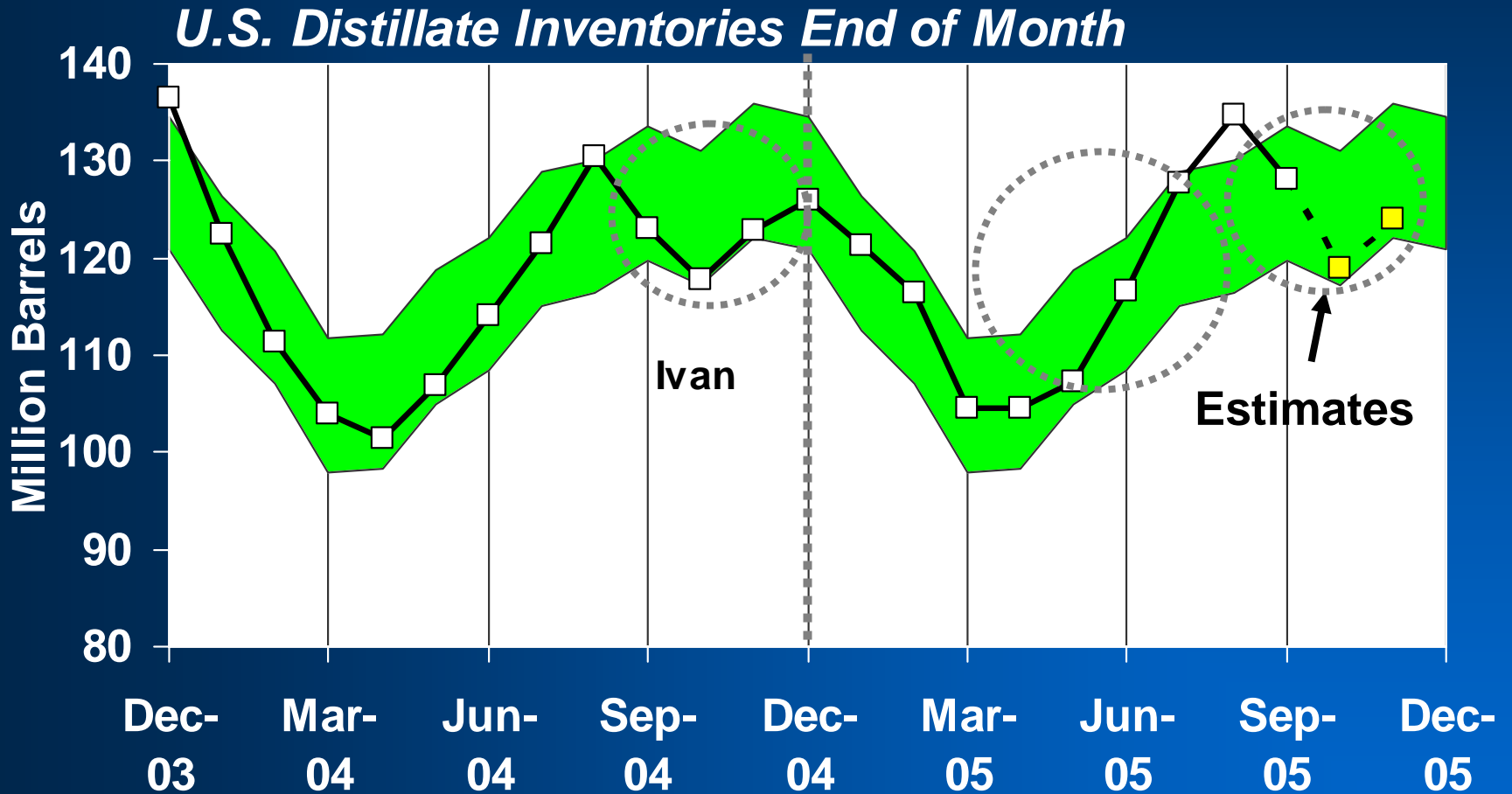


Gasoline Inventory: Fall 2004 and 2005 Are Quite Different



NOTE: Colored Band is Normal Stock Range

Distillate Stocks Impacts: Ivan- 2004, High Distillate Margins- 2005, Katrina & Rita



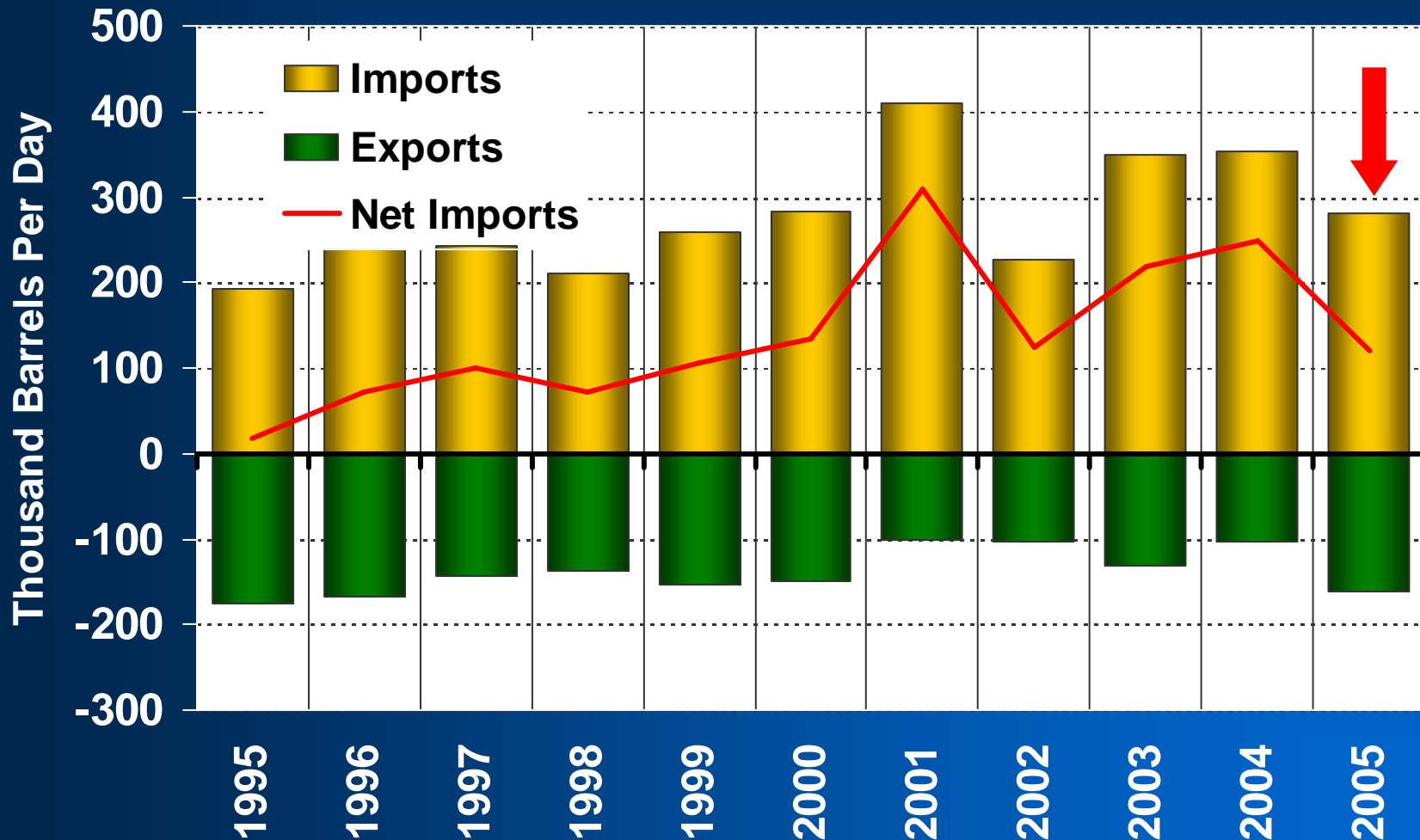
NOTE: Colored Band is Normal Stock Range

Source: EIA



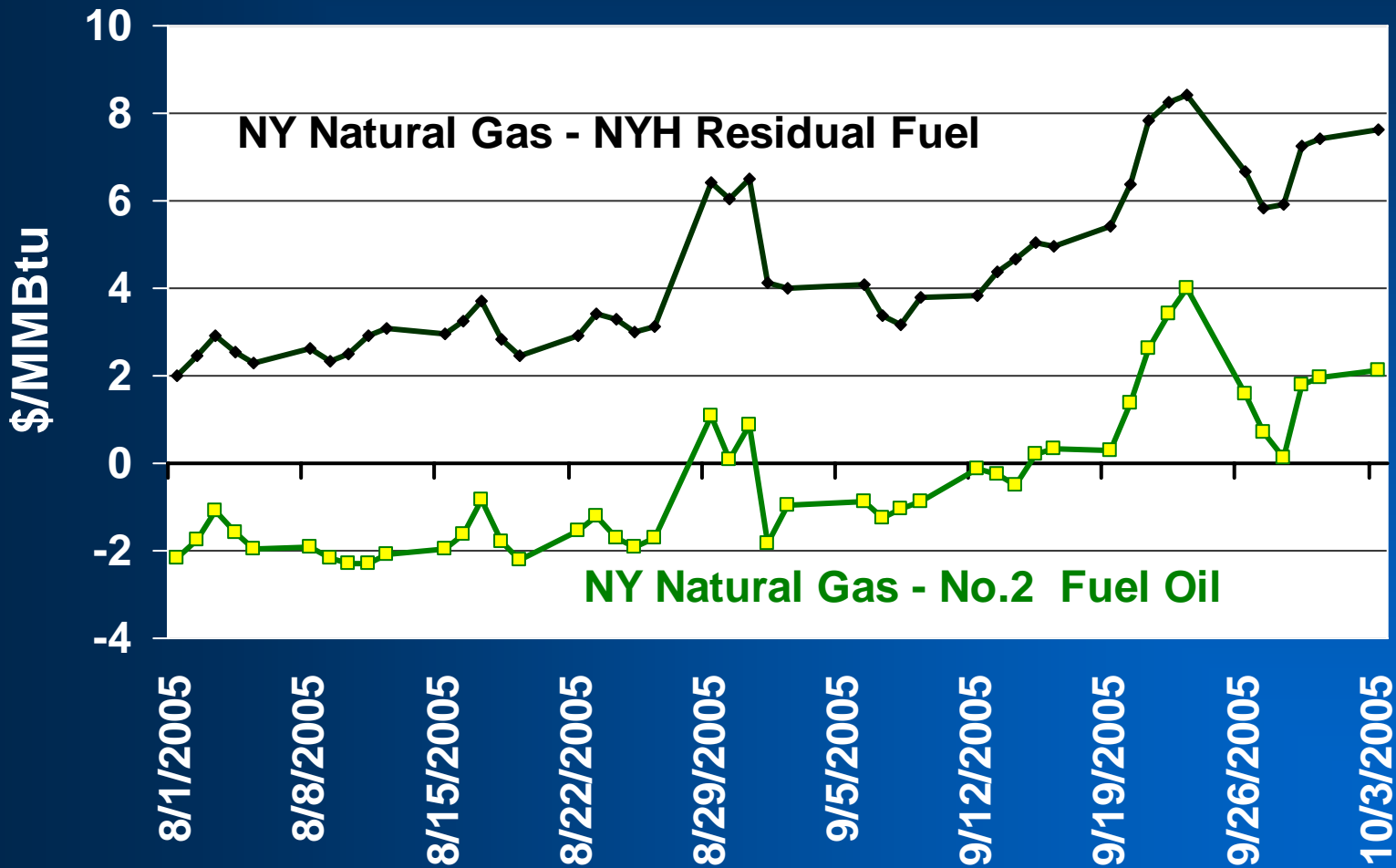
Pre Katrina: 2005 Distillate Not Flowing In or Out of U.S. in Unusual Amounts

U.S. Distillate Imports, Exports Jan-Jul



While All Fuel Prices are High, Natural Gas Gains Favor Fuel Switching

New York Price Differences



Notes: Transco Z6 Spot Natural Gas, NY Harbor No. 2 and Resid (.31-1.0% S)

Source: Reuters



U.S. Distillate Market Leading Up to Winter

- **In 2004, excess gasoline supply developed, while the distillate market tightened**
- **The two products returned to similar balances by mid Summer 2005**
 - **High distillate prices in 2005 provided incentive to increase distillate yields to winter levels, and resulting increased production caused inventories to build**
 - **High availability of gasoline imports kept gasoline inventories high, despite strong demand and high distillate yield**
- **But the Hurricanes Katrina and Rita have caused major gasoline and distillate supply problems**

Winter: Low Stocks Likely; High Prices; Considerable Uncertainty

- **Low distillate stocks**
 - Reduced refinery distillate production from hurricanes
 - Diesel & jet supply affected more than heating oil
 - But heating oil supply and prices affected by other distillates
- **Uncertainties in distillate supply and demand**
 - Timing of refinery restarts uncertain
 - Challenge to increase diesel fuel imports in competitive Atlantic Basin
 - Potential for fuel switching distillate demand increase