

Changing Distillate and Gasoline Markets

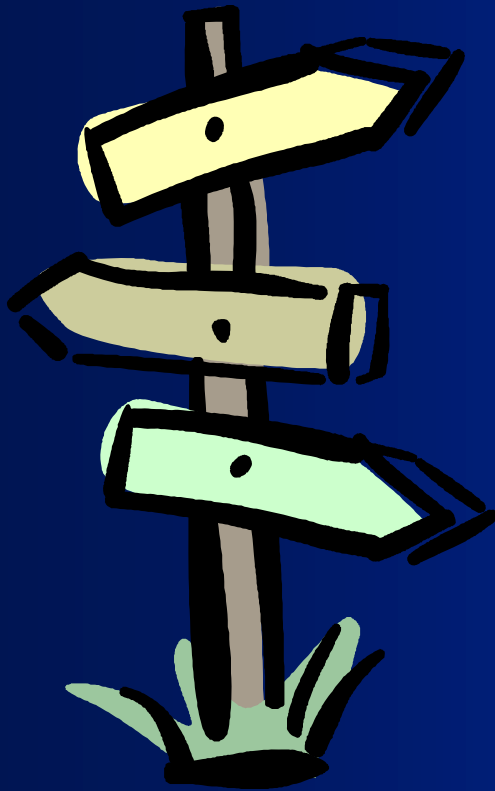
Joanne Shore
John Hackworth
U.S. Energy Information
Administration

Diesel Fuel Webinar
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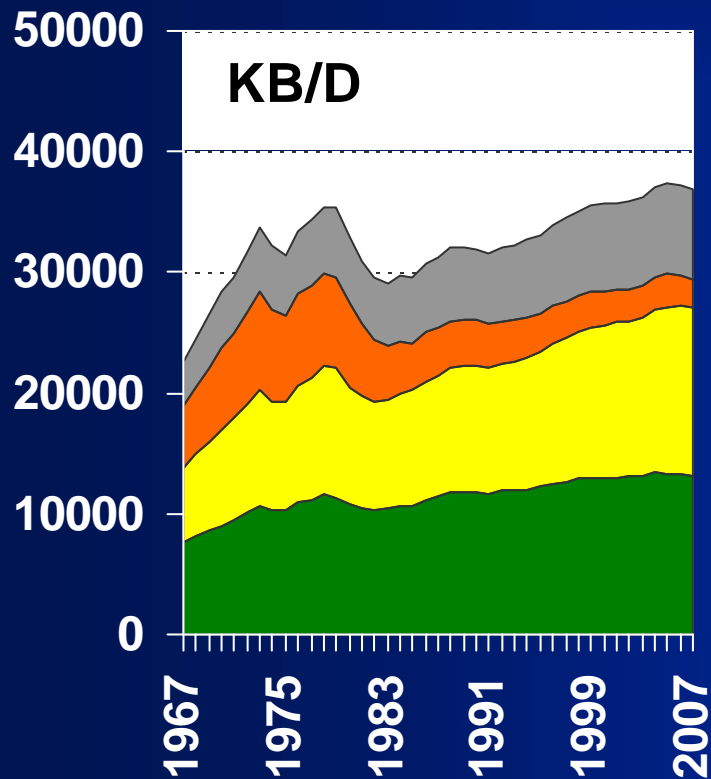
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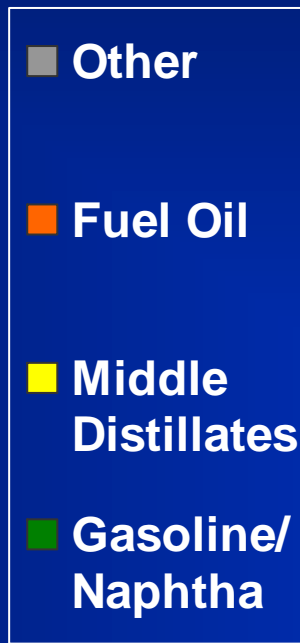
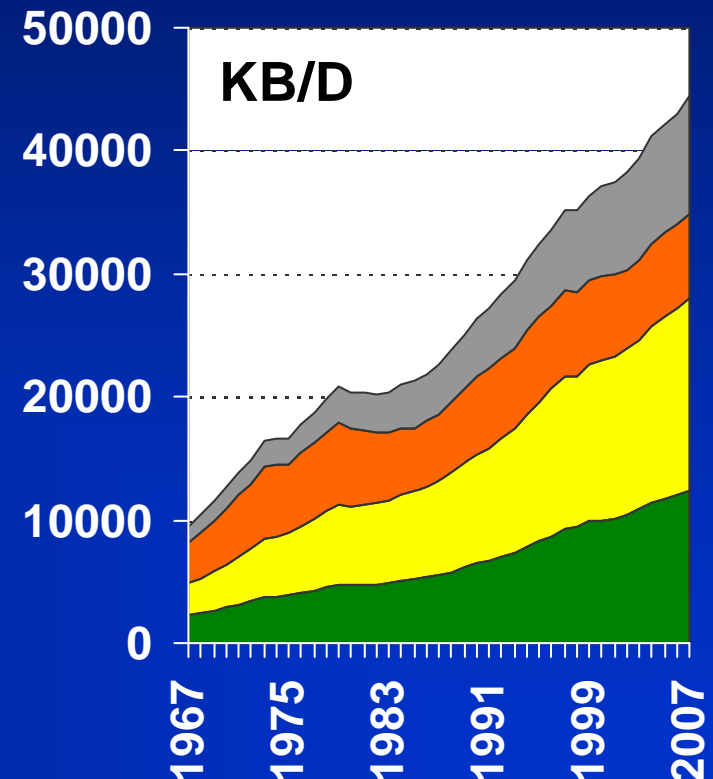
- Long term market factors affecting distillate (heating oil and diesel) and gasoline
- Short-term markets

World Petroleum Consumption Growing: Largest Growth Outside U.S. & Europe

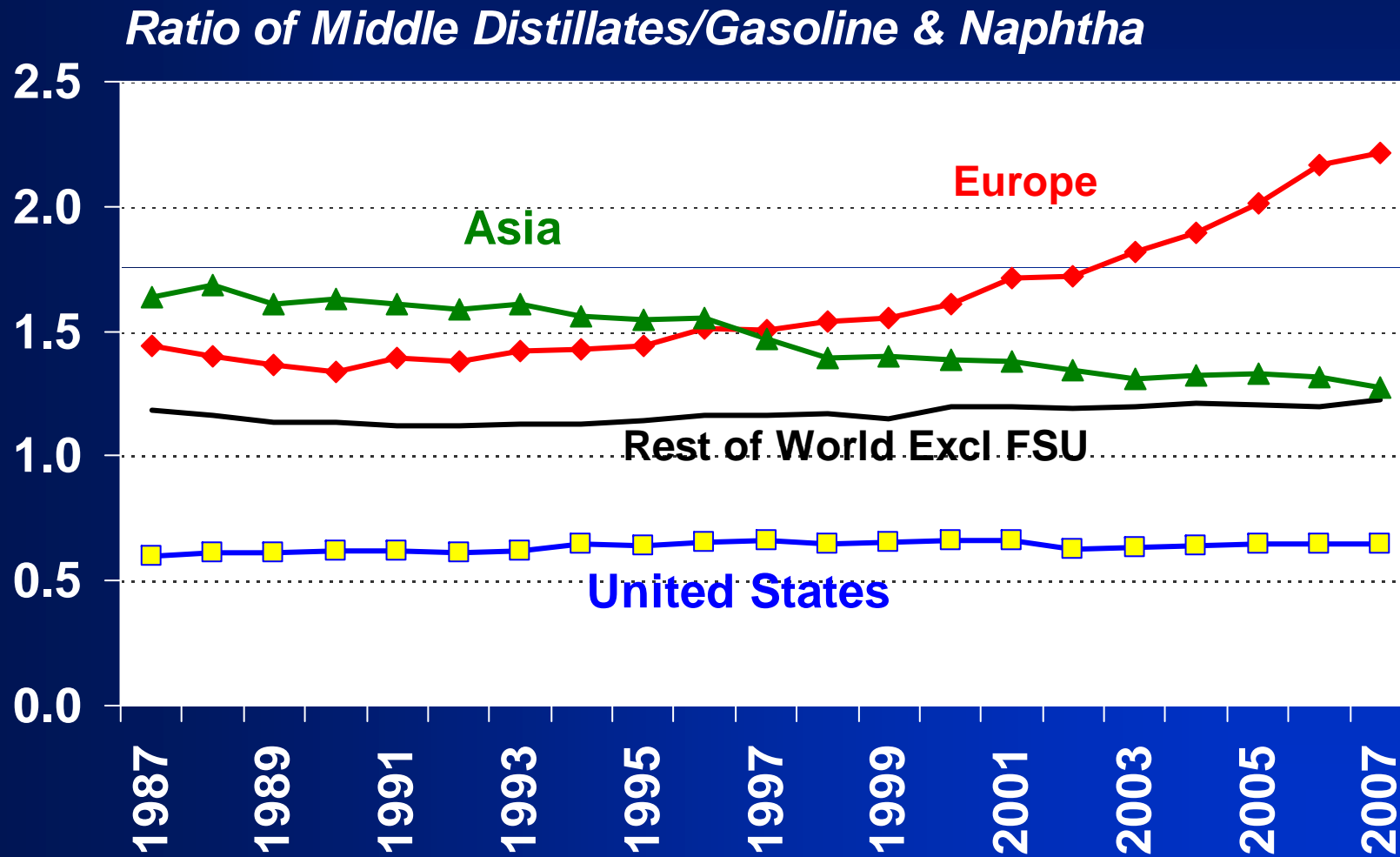
U.S. & Europe



Rest of World Excl FSU



Europe Major Driver of World Consumption Mix Shift Towards Distillates



Source: BP World Statistical Review of World Energy June 2008

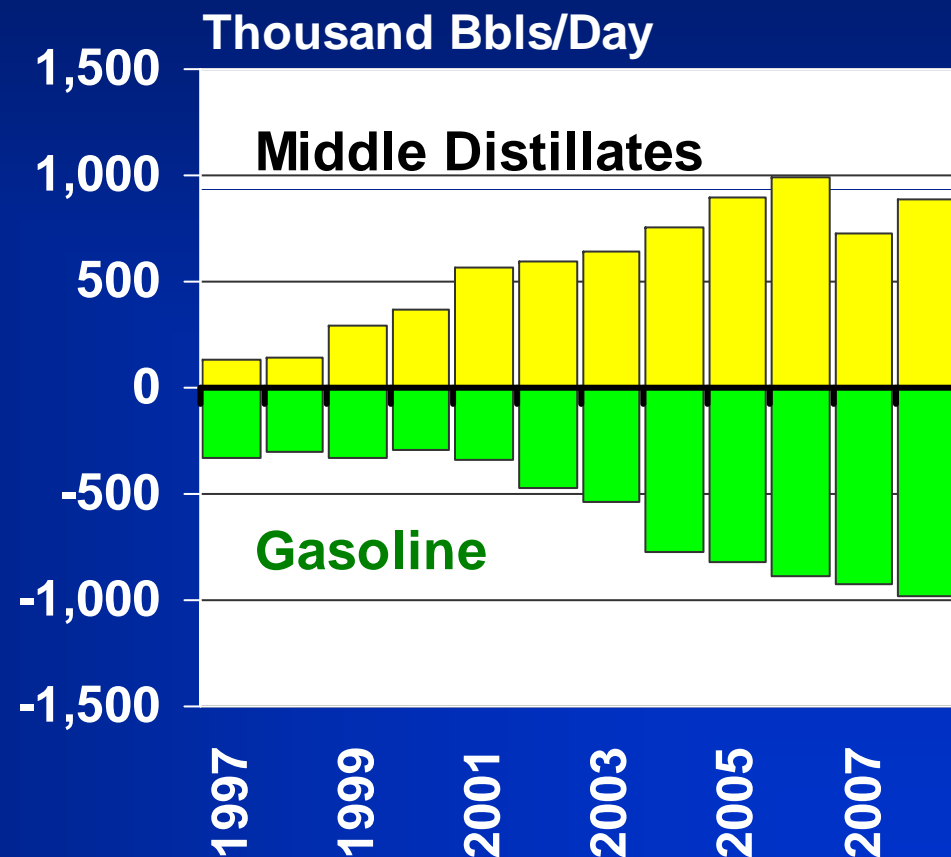


OECD Europe: Imbalance Between Refining and Demand Met with Imports/Exports

European Refinery Yields

	1998	2008
Distil- late	44.4%	49.3%
Gaso- line	26.1%	24.5%

European Net Imports

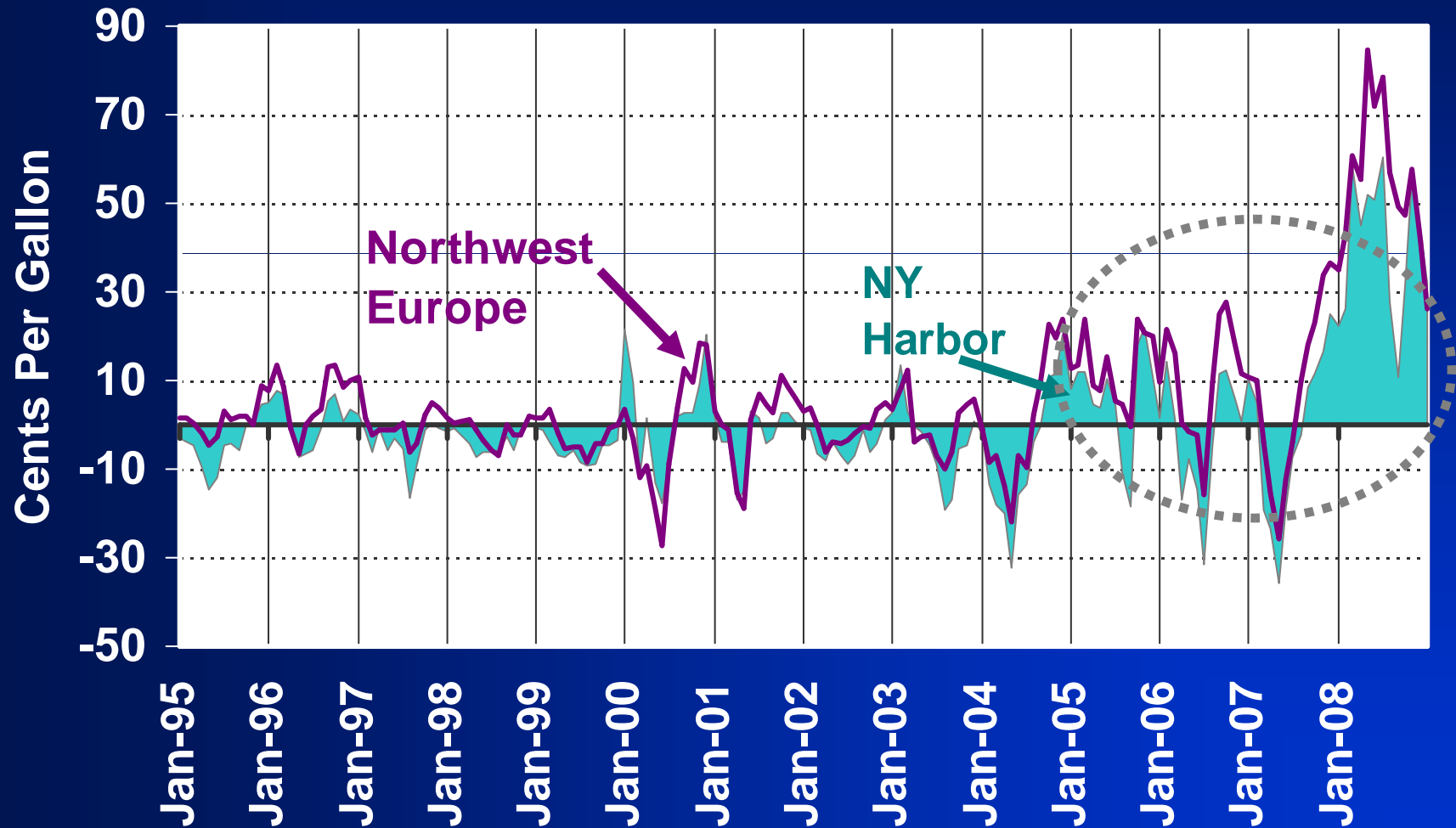


Source: IEA February 2009 Data Base



Atlantic Basin Price Incentives Shifting Toward Distillates

Spot Heating Oil Price - Gasoline Price Differences



Source: Bloomberg New York Harbor Conventional Gasoline, No. 2 Heating Oil; NW Europe 0.2% Heating Oil and Premium Gasoline



U.S. Petroleum Fuel Environment

- **Before 2008**
 - Forecasts called for increasing demand (gasoline and distillate) and need for capacity expansions
 - Slow shifts to distillate
 - Saw planned refinery expansion with hydrocracking investments (Marathon Garyville, Motiva Port Arthur, Valero)
- **2008**
 - Surge in world distillate demand (mainly electricity needs) sent distillate prices up
 - U.S. refiners began shifting yields to distillate through operating changes alone
 - Recession reduced demand, some projects delayed
 - U.S. Energy Independence and Security Act (EISA) reduced long-term need for petroleum-based gasoline

Long-Term U.S. Petroleum-Based* Gasoline and Distillate Fuel Needs Shift with EISA

Million Bbls Per Day	2008	2023	Change
Gasoline & E85 Demand	9.01	9.27	0.26

* Crude-Based excludes ethanol, biodiesel, and distillate from coal-to-liquids and biomass-to-liquids.
Source: AEO 2009 Reference Case



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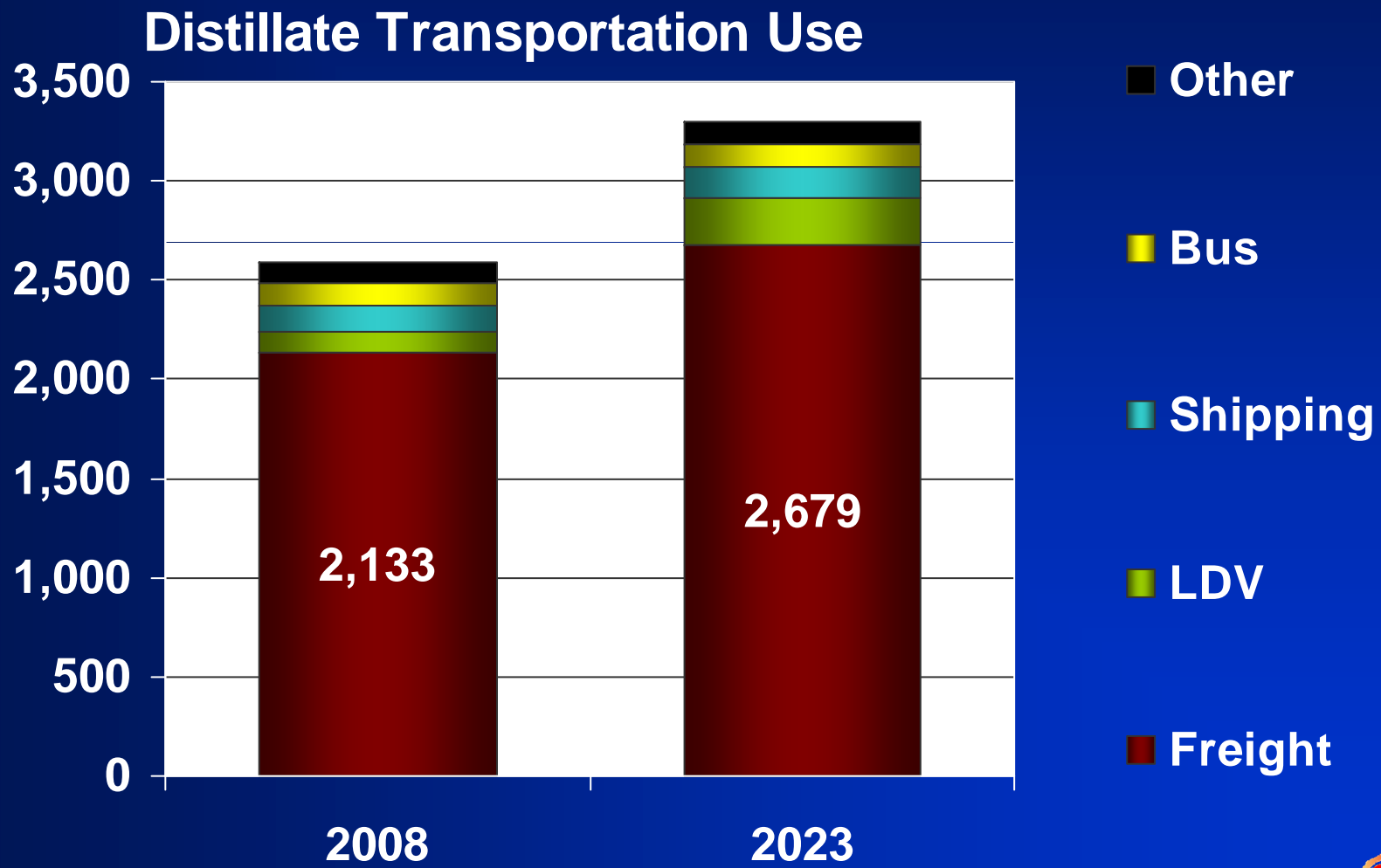
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Ethanol	0.60	1.57	0.97
Crude-Based Gasoline	8.41	7.70	-0.71
Total Distillate Demand	3.94	4.75	0.81
Biomass, CTL, BTL	0.05	0.43	0.38
Crude-Based Distillate	3.89	4.32	0.43

* Crude-Based excludes ethanol, biodiesel, and distillate from coal-to-liquids and biomass-to-liquids.
Source: AEO 2009 Reference Case



Heavy Duty Truck Use Drives Future Diesel Demand

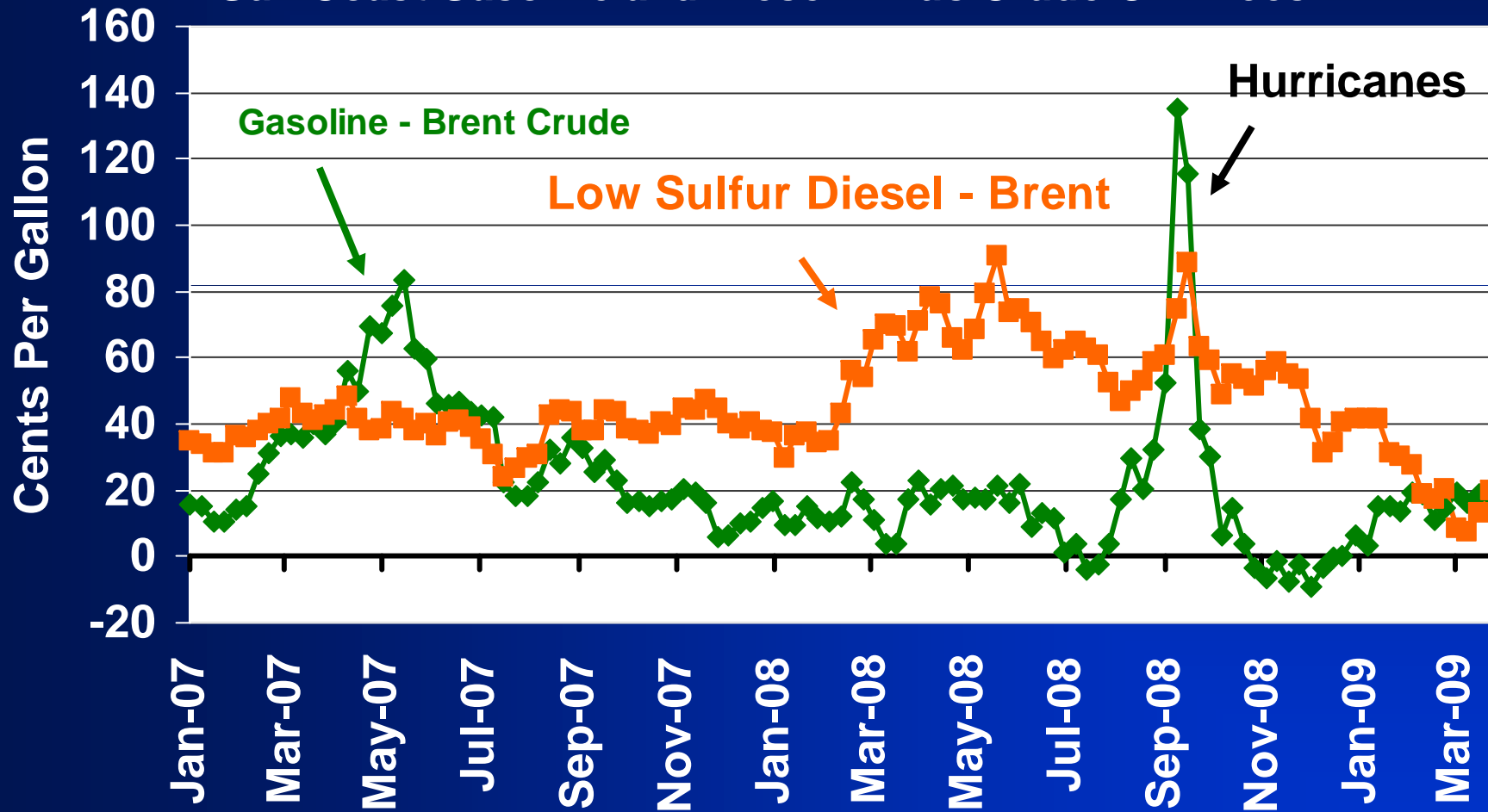


Short-Term Issues

- **Unusually high distillate prices relative to crude oil in 2008**
 - Drought conditions in South America, Africa required diesel imports
 - Lack of natural gas in South America on top of drought
 - Lack of product from Russia/Eastern Europe for Western Europe
- **U.S. refiners responded, providing some insights into future distillate supply potential**

Unusual Short Term Surge in Distillate in 2008

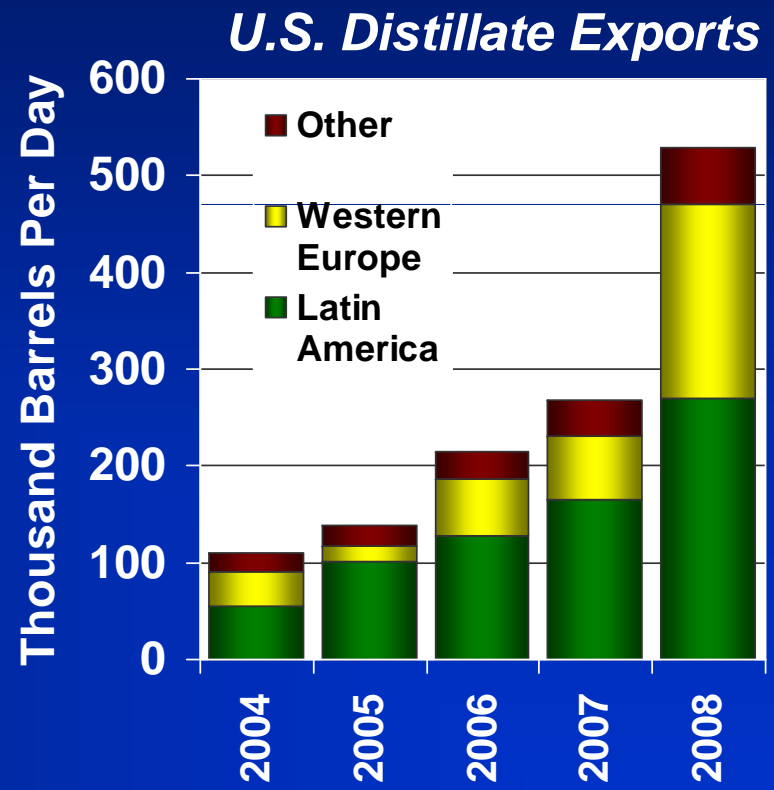
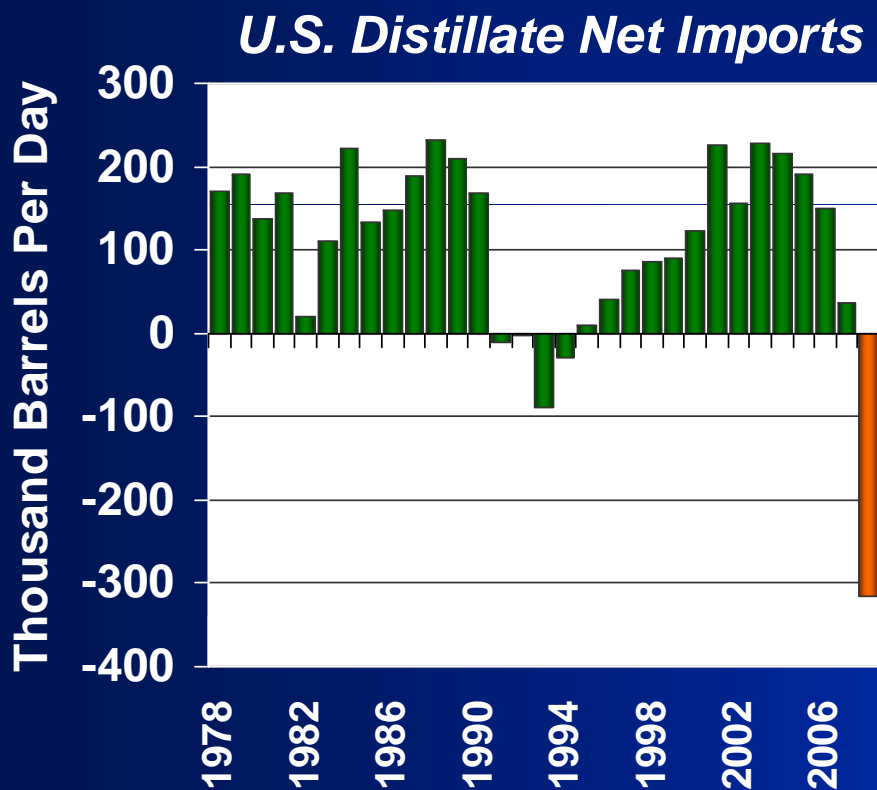
Gulf Coast Gasoline and Diesel Minus Crude Oil Prices



Source: Reuters Weekly Average Spot Prices Gulf Coast Conventional Gasoline, Low Sulfur Diesel, and Brent Crude Oil



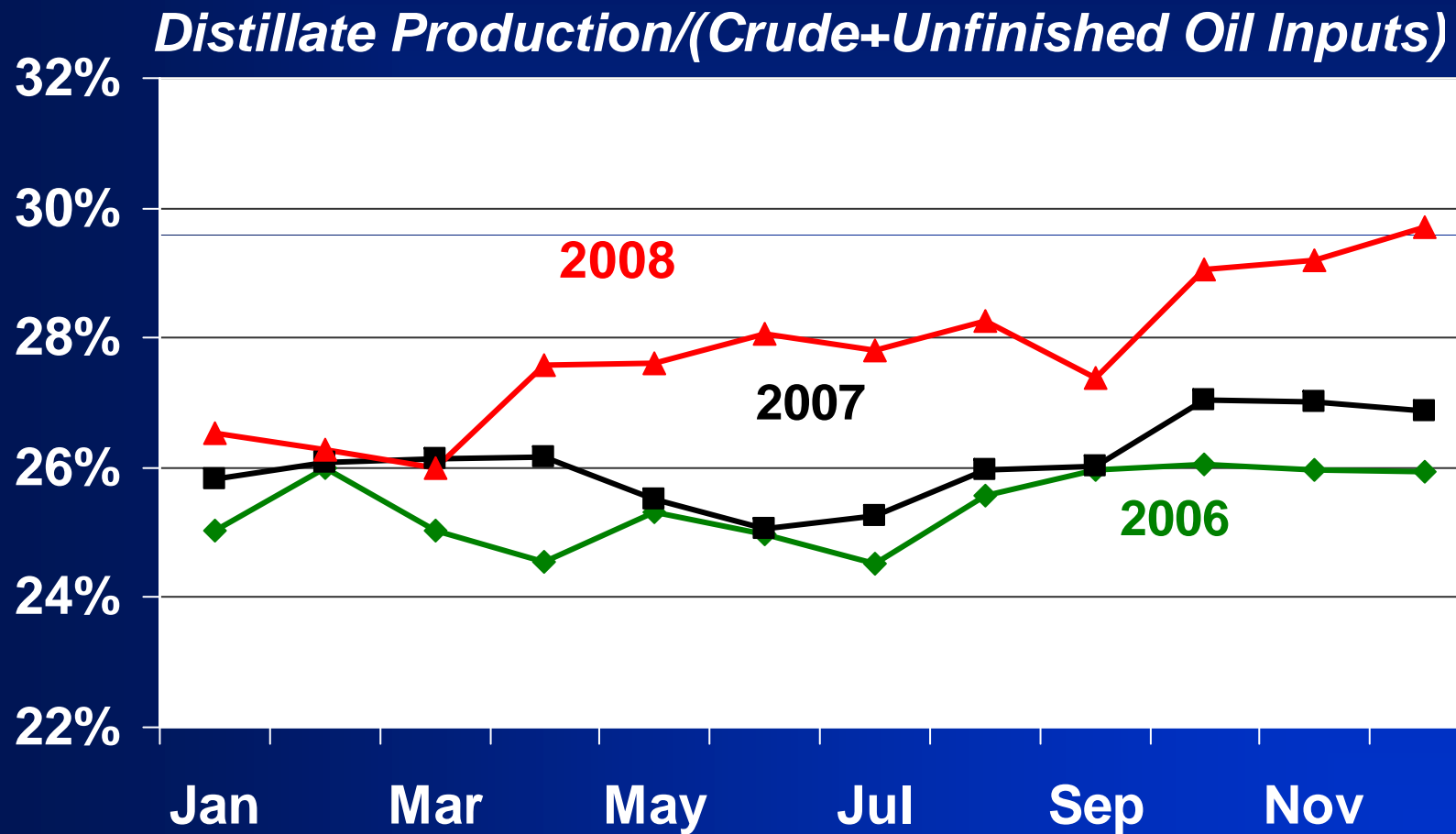
In 2008, U.S. Shifts from Net Importer to Net Exporter of Distillate – Short or Long Term?



Source: EIA Petroleum Supply Monthly Data



Distillate Yields Reflect Price Incentives

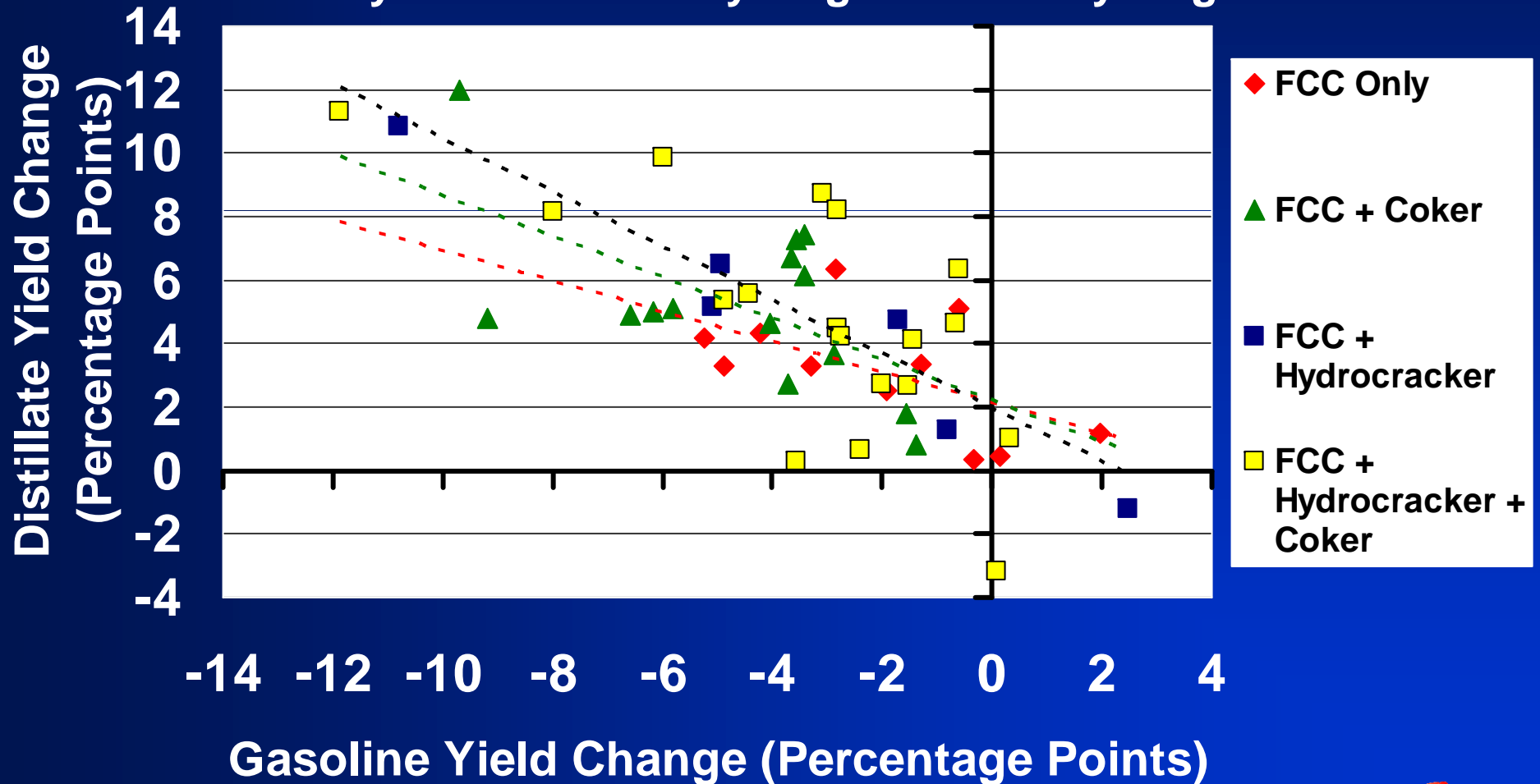


Source: EIA Petroleum Supply Monthly Data



Distillate Incentives Resulted in Unprecedented U.S. Operating Yield Shift

Refinery Yield Shifts May-Aug 2007 to May-Aug 2008



Source: EIA Form 810



Atlantic Basin Fuel Uncertainties

- **Short-term**
 - How long will the economic slump keep demand down?
 - How long will strong short-term distillate pull from other countries continue – Europe in particular
 - How fast will increase in diesel export capacity occur?
 - Lower refinery utilization vs. closures
- **Long-term**
 - Need for new refining capacity moved out in time. How far?
 - Still seeing need for shift to distillate from gasoline, but will U.S. (and world) policies further change level and mix of petroleum product needs?

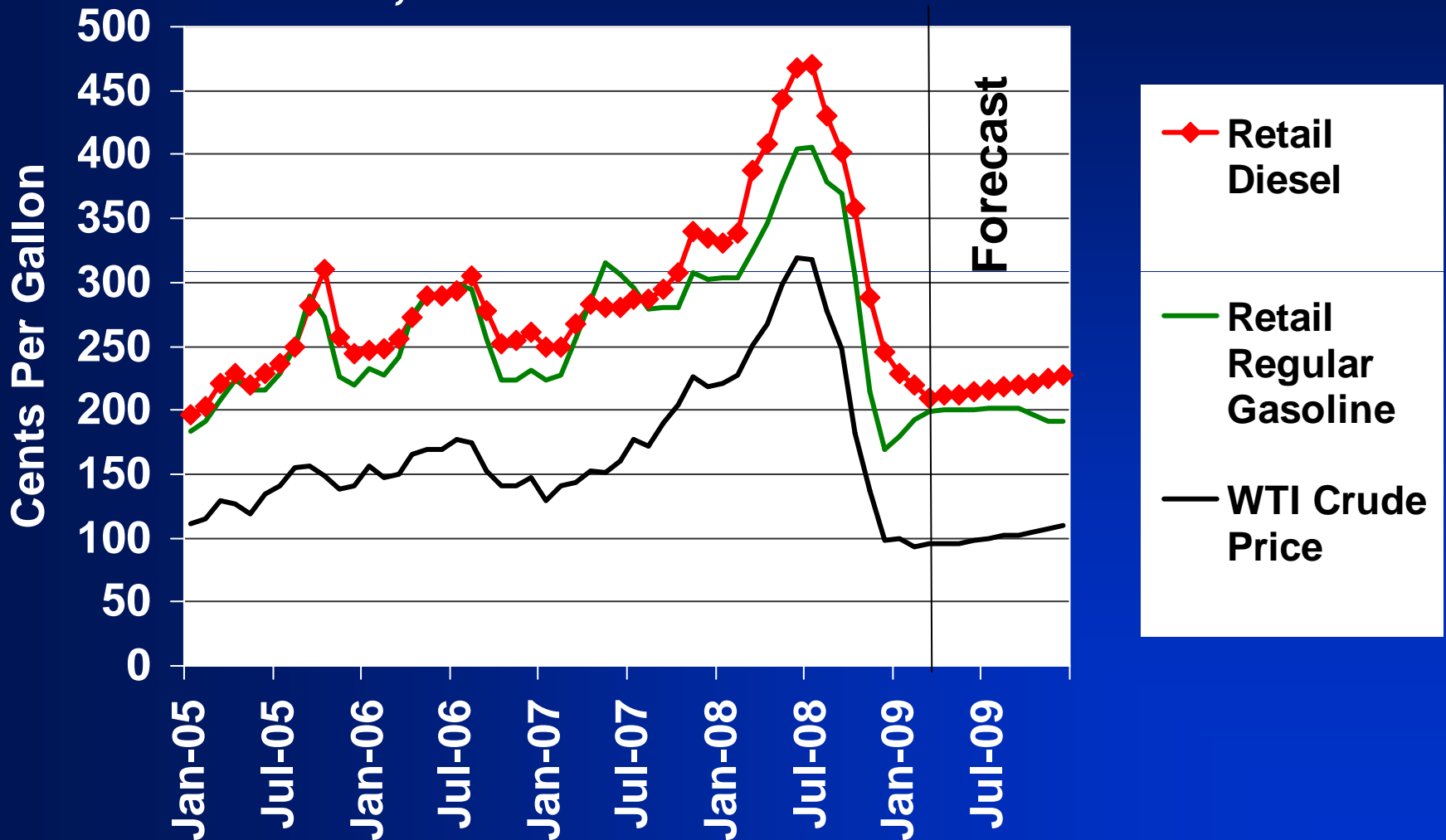
Bottom Line Long Term

- Downward pressure on gasoline prices
- Upward pressure on diesel prices



Short-Term Price Outlook

Crude Oil, Gasoline and Diesel Price Outlooks



Source: EIA's Short-Term Energy Outlook March 2009

Questions?

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