

Aviation fuel and the fuel market

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Aviation Fuel and the Fuel Market



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September 2006

The Next 35 minutes of Your Life!

- *What is Fuel?*
- *How much is used?*
- *How much is left?*
- *How much does it cost?*
- *How can we manage fuel efficiently?*
- *What is the future Price of Fuel?*
- *What can **YOU!** do?*
- *Questions??*

Fuel = Oil - What is it?

“Black Gold!”

- *Crude oil is a Hydrocarbon. i.e. contains only hydrogen and carbon*
- *Crude oil is an excellent source of energy.*
- *Crude oil is a limited planetary resource*
- *There are more than 2000 different types of crude oil*
- *It provides 36% of the worlds primary energy needs*



How Much Crude Oil Was Used in 2005?

	<i>Million Barrels/Day</i>	<i>Barrels/Year/Person</i>	
• The World	82.5	4.56	<i>(Pop 6600m)</i>
• #1 USA	20.7	25.35	<i>(Pop 298m)</i>
• #2 China	7.0	1.95	<i>(Pop 1310m)</i>
• #3 Japan	5.4	15.51	<i>(Pop 127m)</i>

A Fundamental?

*The tragedy is that our golden age of oil
and gas lasted so briefly, as it was merely
transition between an age of ghastly excess supply
and the coming era of chronic and severe tightness!*

*Simmons & Company International
Marine Technology Society Texas
Jan 1997*

*Ron Taylor
Expo Asia September 2006*



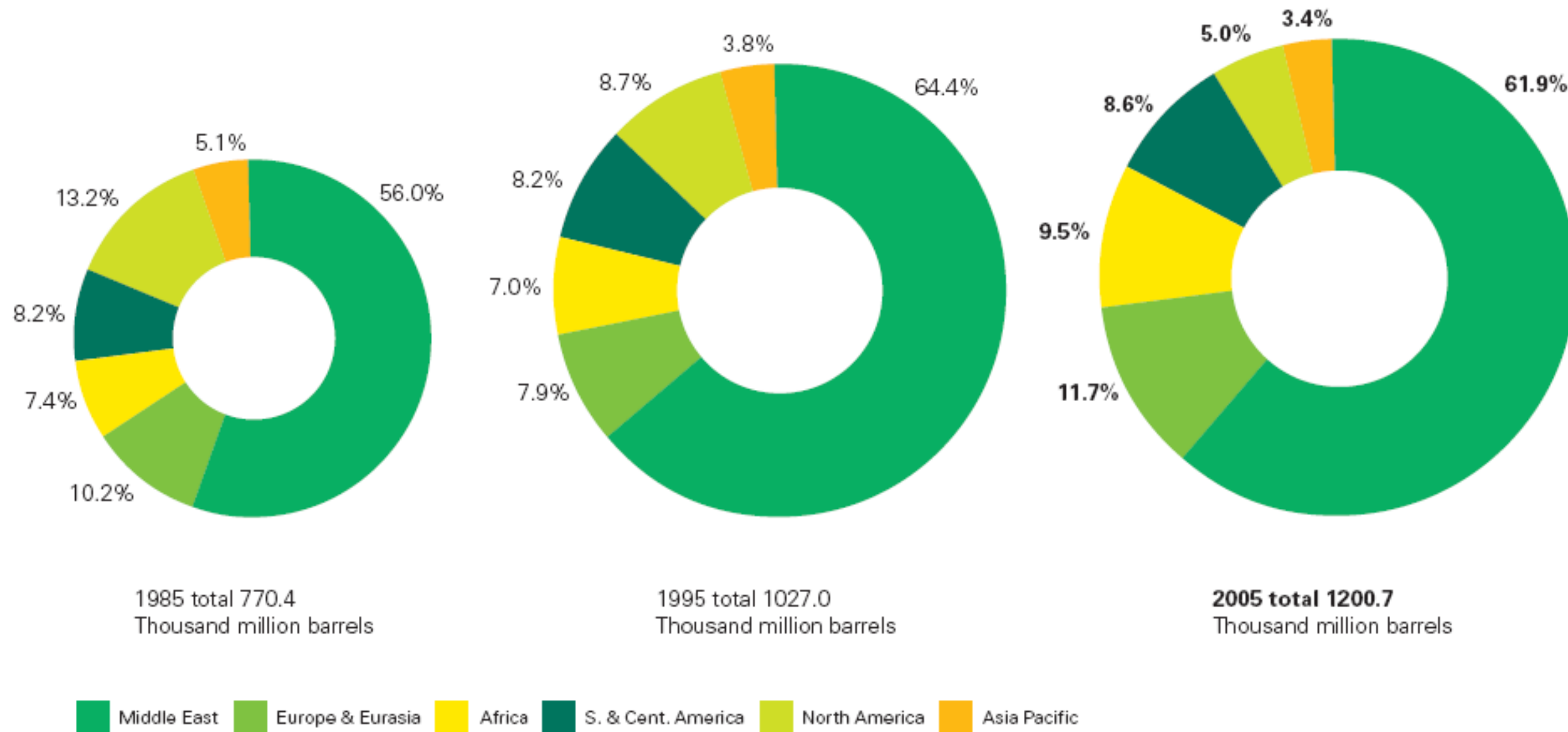
How Much Is Left?

(Based on 2005 Consumption)

- 40 years of liquid Crude Proven Reserves 2005 BP Statistical Review of World Energy June 2006
- 156? years (est) including tar sands and shale etc.
- 400? years of coal.

How Much Crude is Left?

Distribution of proved reserves in 1985, 1995 and 2005
Percentage



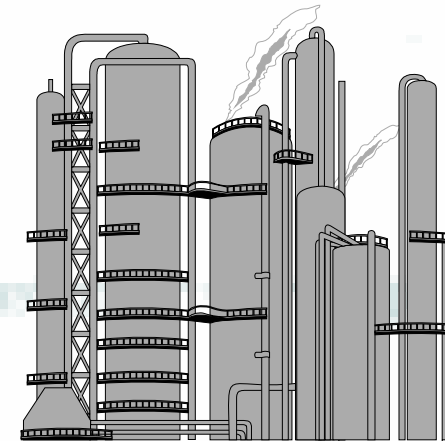
BP Statistical Review of World Energy June 2006

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Influences on Fuel

- **Politics, War, Social Unrest, Terrorism**
- **Cartels & Monopolies**
- **Proven Reserves**
- **Refinery Capacity**
- **Control of Product Stockpiles**
- **Weather**
- **Future / Derivative Trading (Hedging)**
- **Technology (e.g. New Survey Techniques, Alternative Fuels)**
- **Environment**

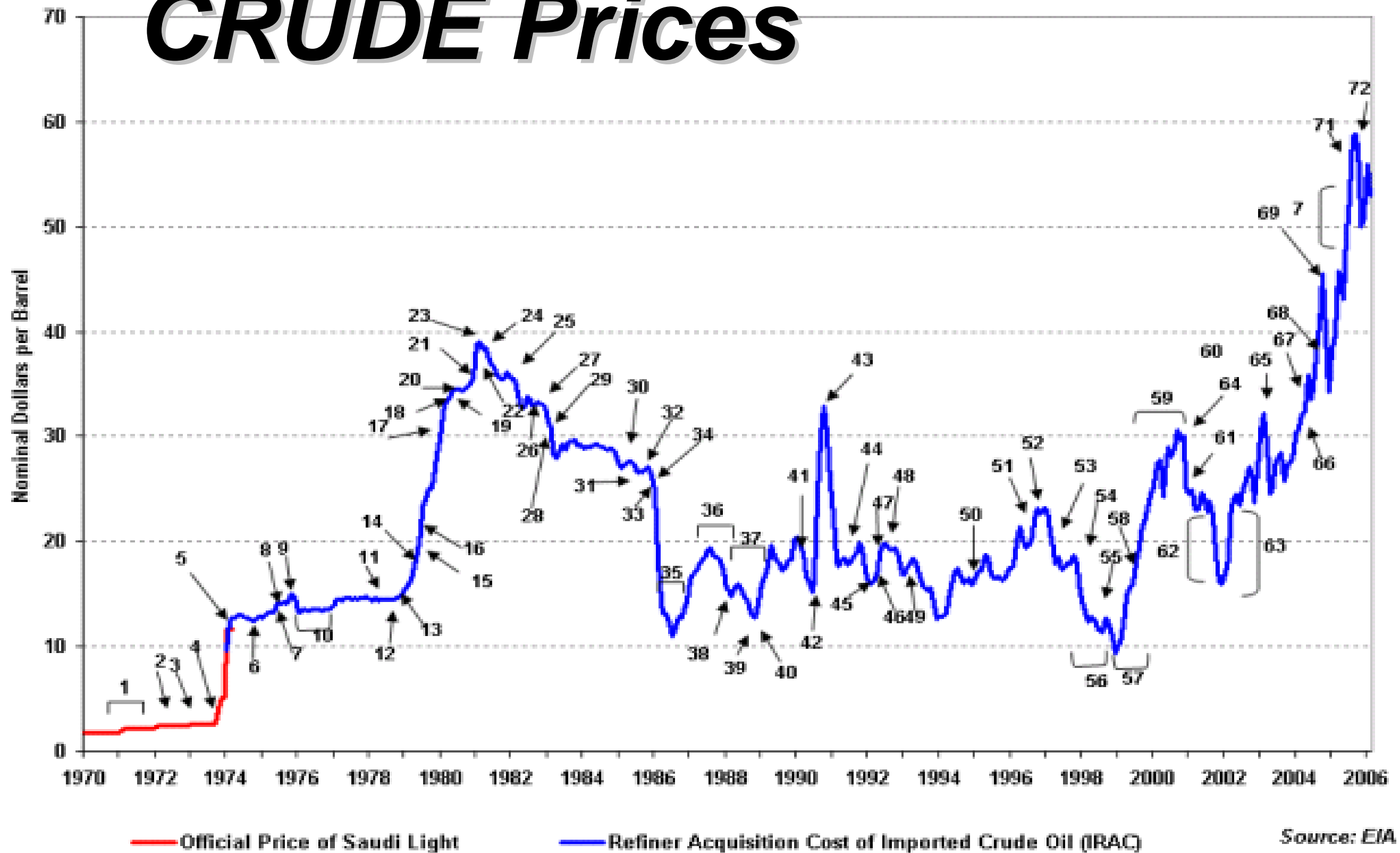


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CRUDE Prices



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Another Fundamental!

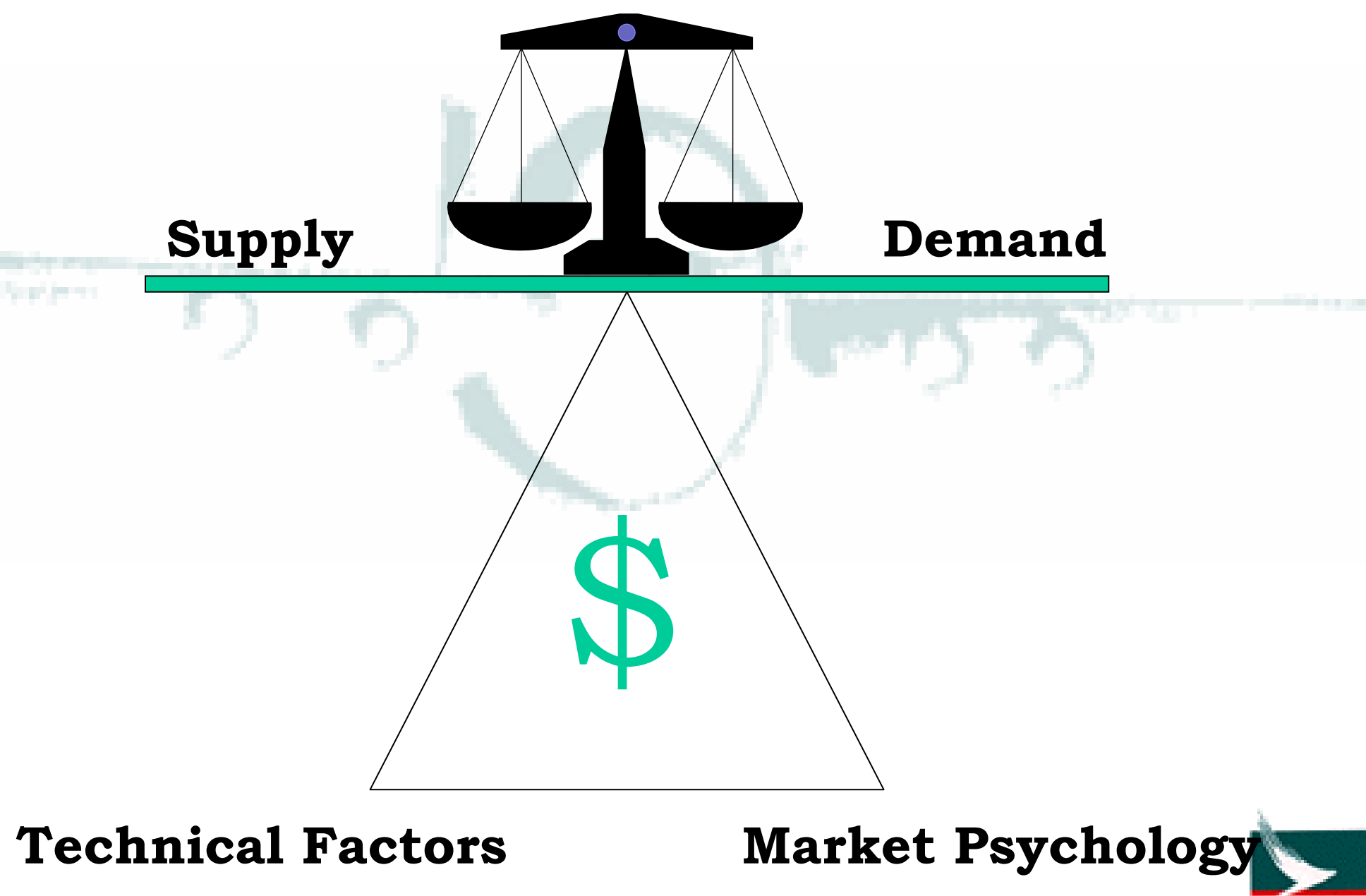
“Increased demand and lagging additions to productive capacity have combined to absorb a significant amount of the slack in energy markets that was essential in containing energy prices between 1985 and 2000”

Alan Greenspan

5th April 2005



Triangle of Influence



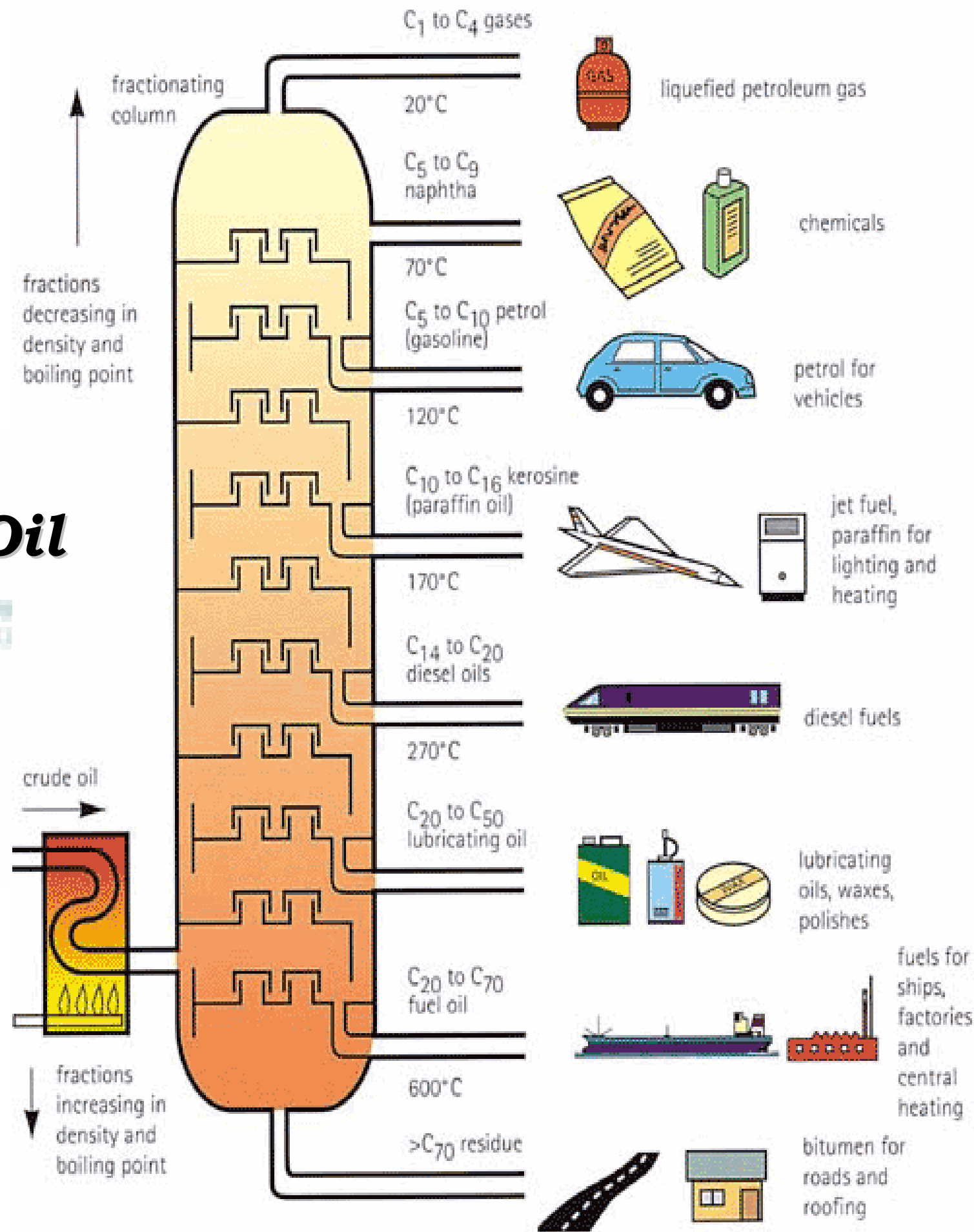
What is Jetfuel?

- It is simply - **Kerosene!**
(Sometimes called Paraffin.)
- It is described as a mid-distillate.
- 99%+ of Jetfuel comes from Crude Oil.
- Kerosene is approximately 10% of the barrel of Crude.

Refinery Process

Products
e.g Jetfuel

Crude Oil



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Influences on Jetfuel Price!

- **Crude Price and Quality**
- **Cartels & Monopolies**
- **Refinery Capacity and Technology**
- **Other Uses for Kerosene**
- **Weather (e.g. Winter, Typhoons etc.)**
- **Future / Derivative Trading (Hedging)**
- **Environment e.g. Low sulphur Diesel/Petrol**

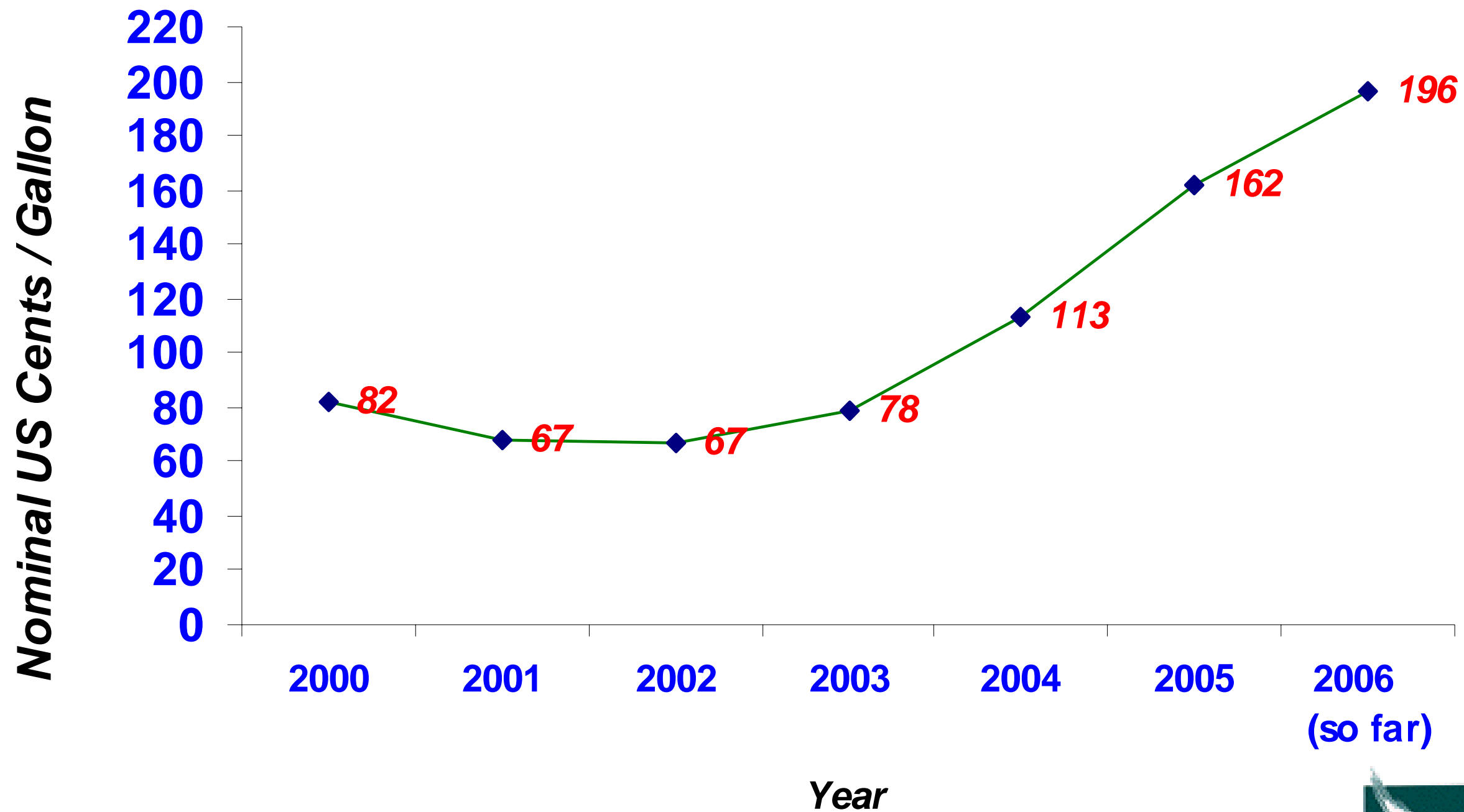
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Jet Fuel Price (2000-2006)

@ Singapore

08Aug
222



How Much Jetfuel is used?

	In 2005	Gals (Million) Tonnes	
(Million)			
Globally (Est)		64,500	195
USA (Est)		18,060	54.7
Mainland China (Est)		2,640	8
Hong Kong SAR (Act)		1,425	4.3
CX Globally (Act)		1,161	3.5

How to Manage Fuel Costs?

Holistically!

- **Good Governance**
- **New Technology**
- **Risk Management**
- **Supply Chain Management**
- **Environment**
- **Efficiency of use**
- **Weight of aircraft and contents**



Weight

An Example
200kg of Paint per
747

At current Prices
this is a saving of

USD29,000
/Aircraft/year

Lots of
Variables



What Can YOU Do??

SIMPLE???

Weight!!!

Jetfuel Price?

The Future????



Questions?

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